

2 4 0002

Site:	_____
Break:	2.4
Others:	_____

4686

**REMOVAL ACTION REPORT AMENDMENT
FOR THE
CHEVRON CHEMICAL COMPANY SITE
ORLANDO, FLORIDA**

Prepared for: Chevron Chemical Company

JULY 27, 1994



Environmental Consulting • Remediation • Technology Development

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1.0 INTRODUCTION

1.1 INTRODUCTION

This Removal Action Report (RAR) for the Chevron Orlando site was prepared in accordance with the Administrative Order on Consent (AOC) with Chevron Chemical Company, Mr. Robert R. Uttal, and the U.S. Environmental Protection Agency (EPA Docket No. 90-37-C). The RAR summarizes the additional Removal Action activities conducted at the Armstrong Trailer Park which is located adjacent to and to the north of the Chevron Orlando site.

1.2 BACKGROUND INFORMATION

The nature and probable extent of contamination on the Chevron Orlando site was assessed in accordance with the requirements of the AOC during September and October 1990. The Contamination Assessment Report (BCC, 1991) presents the results of the site assessment. The results of the assessment activities were used to define general areas of soil contamination, and to identify the presence of groundwater contamination. The primary contaminants of interest identified through the assessment were chlordane, DDT (and its daughter products), parathion, and a variety of petroleum hydrocarbons.

The information presented in the Contamination Assessment Report (BCC, 1991) was used to plan the Removal Action activities for the Chevron site. The Removal Action Plan (RAP) was prepared by Brown and Caldwell Consultants (July 1991), and submitted to the EPA on behalf of Chevron Chemical Company and Mr. Uttal. The RAP defines the Removal Action activities to be conducted to satisfy the intent of the AOC. The EPA reviewed the RAP, and issued a letter authorizing Chevron to proceed with the Removal Action in August 1991.

The Removal Action conducted in 1991 and 1992 was designed to minimize the release or threat of release of hazardous substances from the site into the environment. The Agency for Toxic Substances and Disease Registry (ATSDR) defined the removal action goals and cleanup levels for the soils on site. The ATSDR-defined goals were removal of shallow soils (0- to 1-foot below land surface) with chlorinated pesticide concentrations in excess of 50 milligrams per kilogram (mg/kg), and removal of deeper soils with chlorinated pesticide concentrations in excess of 100 mg/kg. ATSDR further recommended the use of chlordane as an indicator chemical.

During the initial Removal Action, the structures on the site were demolished and removed, and the contaminated soil was excavated. At the completion of the initial Removal Action, 17,780 tons of pesticide-contaminated soil

were excavated and disposed of; 4,900 tons of petroleum-contaminated soil were excavated and treated; and 126,000 gallons of recovered stormwater and groundwater were treated and disposed of on-site. All of the excavated areas were backfilled with clean soil and the site graded and seeded.

The Removal Action Report (BCC, 1992) describes the Removal Action activities, presents a pre-Removal risk analysis, and discusses the groundwater investigations which were conducted. This report was submitted to the EPA in December 1992 .

An Administrative Order By Consent for a Remedial Investigation and Feasibility Study (RI/FS) was signed by Chevron Chemical Corporation and the EPA. The AOC went into effect on April 5, 1993 upon EPA's approval of the AOC Scope of Work. The intent of the RI/FS is to further assess the groundwater contaminant migration, and to determine whether stormwater runoff transported contaminants off of the site historically. The RI/FS is being conducted in accordance with the Superfund Accelerated Cleanup Model (SACM).

The results of the Phase 2 RI field sampling and analysis identified chlorinated pesticide contamination in the soils within limited areas of the Armstrong Trailer Park. The sample locations are shown on Figure 1-1, and the analytical results are presented in Table 1-1. Chlordane was detected in one soil sample at a concentration of 37 mg/kg, which is of the same order of magnitude as the cleanup criteria established by the ATSDR for the Removal Action.

Chevron Chemical Company performed a risk analysis to determine whether the concentrations of chlordane represented a risk to human health. The results of the risk analysis identified the need for additional soil sampling to more accurately define the areal extent of the chlordane in surface soils.

On November 17, 1993, TASK Environmental, Inc. (TASK) collected soil samples from 40 additional locations within the Armstrong Trailer Park, as shown on Figure 1-1. These samples were analyzed for chlorinated pesticides using Method 8080. The analytical results for the additional soil samples are presented on Table 1-2.

The additional soil sampling results identified an area in the southwest corner of the trailer park which may have been impacted by contaminant transport through stormwater runoff from the Chevron Orlando site. Elevated concentrations of chlordane were detected at four other isolated sample locations in the trailer park. The concentrations of chlordane in the surficial soil samples (collected from land surface to 3-inches BLS) are presented graphically on Figure 1-2.

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1.3 REMOVAL ACTION OBJECTIVES AND GOALS

The additional Removal Action was designed to remove chlordane contaminated soil from the Armstrong Trailer Park which may pose a health threat to the residents living in the park. The goal of this Removal Action was to excavate and dispose of soils with chlordane concentrations exceeding the preliminary remediation goal (PRG) of 4.9 mg/kg.

The additional Removal Action activities were conducted in accordance with the procedures defined in the Removal Action Plan Amendment (TASK, 1994); the Sampling and Analysis Plan Amendment (TASK, 1993); and the Quality Assurance Project Plan Amendment (TASK, 1993). These plans are included in this report by reference.

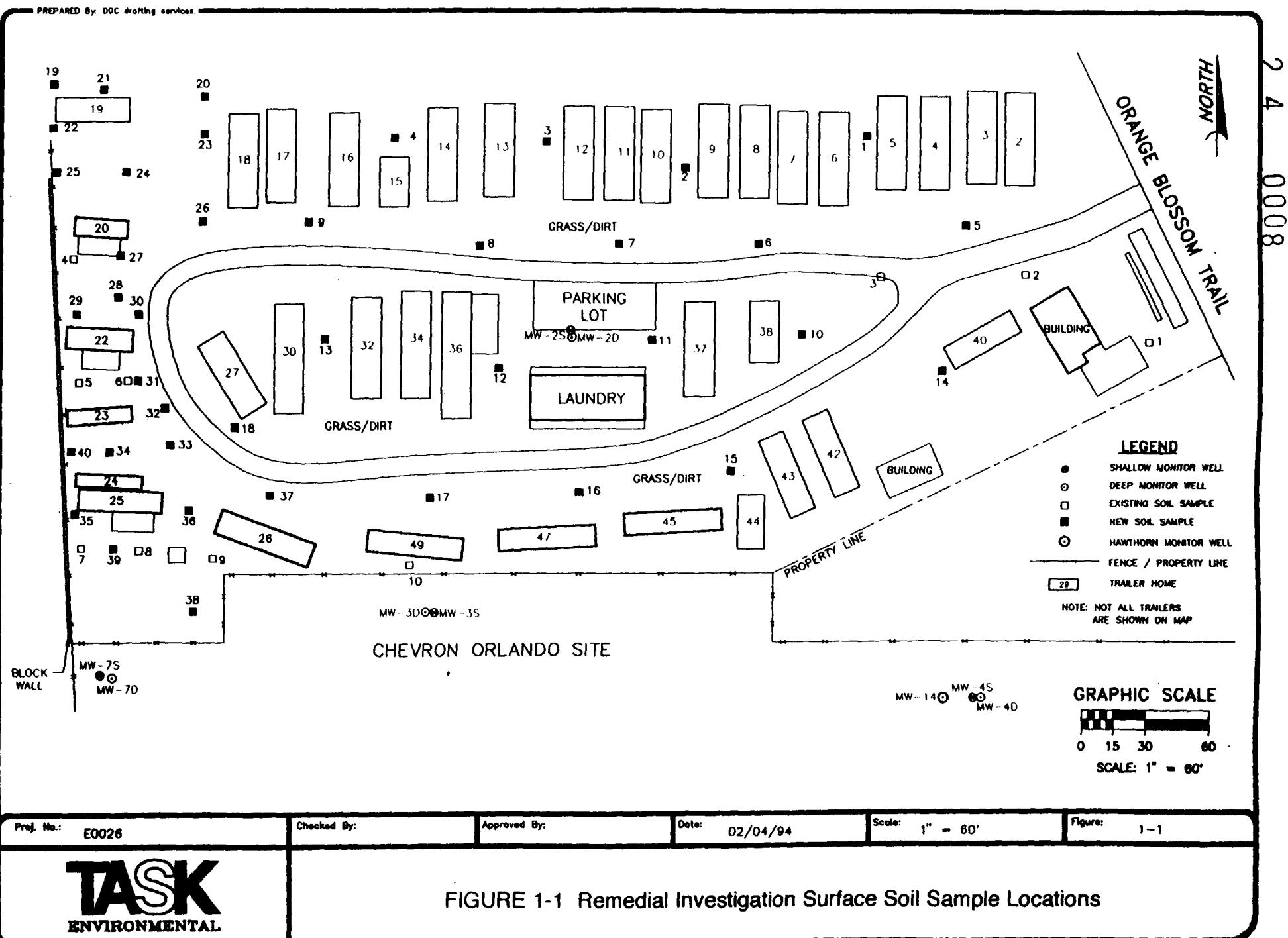


FIGURE 1-1 Remedial Investigation Surface Soil Sample Locations

TABLE 1-1
SUMMARY OF SEPTEMBER 28, 1993 SOIL SAMPLE ANALYTICAL RESULTS
CHEVRON ORLANDO
Page 1 of 1

Parameter		SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-106	SS-071	SS-072	SS-081	SS-082	SS-09	SS-10
Chromium	mg/kg	4	6	4	7	11	8	7	5	<3	<3	<3	11	3
Lead	mg/kg	110	15	85	65	120	130	120	85	13	12	6.9	40	32
Dieldrin	ug/kg	18	<4	<40	<80	14	<4	<4	1200	32	<200	<40	<80	<4
Endrin	ug/kg	<8	<8	<80	<160	<8	<8	<8	<800	<8	<400	<80	110	<8
4,4-DDD	ug/kg	9	<5	<50	<100	23	<5	<5	<500	20	<250	<50	<100	<5
4,4-DDT	ug/kg	110	<5	370	380	120	110	110	1500	76	410	150	<100	65
4,4-DDE	ug/kg	52	<4	310	<80	96	280	190	1300	<4	580	84	180	90
Endosulfan Sulfate	ug/kg	<20	<20	<200	<400	<20	<20	<20	<2000	<20	<1000	<200	<400	<20
Chlordane	ug/kg	620	63	690	3400	890	660	670	37000	660	7600	1400	5700	420
Acetone	ug/kg	<10	<10	88	<10	<10	<10	<10	<10	<10	180	14	<10	<10
2-Butanone (MEK)	ug/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	17	<10	<10	<10
Methylene Chloride	ug/kg	<5	<5	<5	<5	<5	<5	<5	<5	<5	6	6.4	<5	<5
4-Methyl-2-Pentanone (MIBK)	ug/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	<10	<10
Bis(2-ethyl hexyl)phthalate	ug/kg	<330	1540	<330	<330	<330	<330	<330	<330	<330	<330	<330	1000	<330
Di-n-butyl phthalate	ug/kg	<330	<330	470	1900	<330	<330	<330	<330	<330	<330	<330	<330	<330

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TABLE 1-2
 SUMMARY OF NOVEMBER 17, 1993 SOIL SAMPLE ANALYTICAL RESULTS
 CHEVRON ORLANDO
 Page 1 of 4

SAMPLE LOCATION	TP-SS-01	TP-SS-02	TP-SS-03	TP-SS-04	TP-SS-05	TP-SS-06	TP-SS-07	TP-SS-107	TP-SS-08	TP-SS-09	TP-SS-109	TP-SS-10	TP-SS-11
PARAMETER													
a-BHC	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<2000
g-BHC	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<2000
Heptachlor	7.9(1)	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<4000
Heptachlor epoxide	150(1)	<4	<4	<4	7(1)	<4(1)	<4	<4	11(1)	<4	<4	<4	<2000
Endosulfan I	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<10000
Dieldrin	1500(1)	17(1)	16(1)	<4	<4	7.9(1)	<4	<4	13(1)	<4	<4	<4	<2000
Endrin	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<8	<4000
4,4-DDD	<5	<5	<5	<5	<5	10(1)	<5	<5	10(1)	<5	<5	<5	<2500
4,4-DDT	260(1)	95(1)	140(1)	42(1)	41(1)	250(1)	27	11(1)	100(1)	120(1)	110(1)	75(1)	<2500
4,4-DDE	140(1)	79(1)	92(1)	19(1)	73(1)	240(1)	70	42(1)	69(1)	120(1)	110(1)	73(1)	<2000
Chlordane	21000(1)	3000(1)	2700(1)	200(1)	290(1)	720(1)	86	47(1)	3100(1)	480(1)	360(1)	620(1)	23000(2)
Methoxychlor	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<5000

(1) = Compound confirmed by secondary column.

(2) = High concentrations may mask the presence of other components in sample.

(3) = Spike and/or surrogate recoveries could not be calculated due to sample dilution.

(4) = Compound could not be quantified due to presence of technical chlordane.

All results presented in ug/kg.

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TABLE 1-2
SUMMARY OF NOVEMBER 17, 1993 SOIL SAMPLE ANALYTICAL RESULTS
CHEVRON ORLANDO
 Page 2 of 4

SAMPLE LOCATION	TP-SS-12	TP-SS-13	TP-SS-14	TP-SS-15	TP-SS-16	TP-SS-17	TP-SS-18	TP-SS-19	TP-SS-20	TP-SS-21	TP-SS-22	TP-SS-23	TP-SS-24
PARAMETER													
a-BHC	<4	<4	<4	<4	<4	<40	<4	<40	<40	<40	<200	<80	4
g-BHC	<4	<4	<4	<4	<4	<40	<4	<40	<40	<40	<200	<80	
Heptachlor	<8	<8	<8	<8	<8	<80	<8	<80	<80	<80	<400	<160	
Heptachlor epoxide	<4	<4	<4	<4	<4	<40	<4	<40	<40	<40	<200	<80	
Endosulfan I	<20	<20	<20	<20	<20	<200	<20	<200	<200	<200	<1000	<400	001
Dieldrin	<4	12(1)	<4	22(1)	9.4	<40	<4	<40	1100	63	<200	<80	
Endrin	<8	<8	<8	<8	<8	<80	<8	<80	<80	<80	<400	<160	
4,4-DDD	<5	<5	<5	<5	25	<5	<50	42	<50	<50	<250	<100	
4,4-DDE	17(1)	53(1)	75(1)	240(1)	66	26	200	120	55	150	320	400	540
Chlordane	17(1)	100(1)	49(1)	170(1)	150	33	450	52	48	120	230	290	350
Chlordane	140(1)	6000(1)	420(1)	1600(1)	160(2)	89	1600(2)	1000(2)	320	880(2)	3400(2)	1000	1400
Methoxychlor	<10	<10	<10	<10	25	<10	<100	<10	<100	<100	<500	<200	

(1) = Compound confirmed by secondary column.

(2) = High concentrations may mask the presence of other components in sample.

(3) = Spike and/or surrogate recoveries could not be calculated due to sample dilution.

(4) = Compound could not be quantified due to presence of technical chlordane.

All results presented in ug/kg.

TABLE 1-2
SUMMARY OF NOVEMBER 17, 1993 SOIL SAMPLE ANALYTICAL RESULTS
CHEVRON ORLANDO
Page 3 of 4

SAMPLE LOCATION	TP-SS-25	TP-SS-26	TP-SS-27	TP-SS-28A	TP-SS-28B	TP-SS-29	TP-SS-30	TP-SS-31	TP-SS-32A*	TP-SS-32B	TP-SS-33	TP-SS-34
PARAMETER												
a-BHC	<80	<200	<80	<40	<4	<4	<4	<80	<4	<4	<4	<40
g-BHC	<80	<200	<80	<40	<4	<4	<4	<80	<4	<4	<4	<40
Heptachlor	<160	<400	<160	<80	<8	<8	<8	<160	<8	<8	<8	<80
Heptachlor epoxide	<80	<200	<80	<40	<4	<4	<4	<80	<4	<4	<4	<40
Endosulfan I	<400	<1000	<400	<200	<20	<20	26	<400	<20(4)	<20	<20(4)	<200
Dieldrin	180	850	<80	<40	<4	<4	<4	<80	<4	<4	9.5	<40
Endrin	<160	<400	<160	<80	<8	<8	<8	<160	<8	<8	<8	<80
4,4-DDD	<100	<250	<100	<50	<5	<5	20	<100	20	<5	<5	<50
4,4-DDT	390	900	120	160	6.1	14	76	<100	29	17	20	100
4,4-DDE	<80	550	170	210	9.1	22	120	<80	45	23	49	78
Chlordane	6500(2)	5300(2)	1900	550	42	77	680(2)	1000(2)	570(2)	66	970(2)	1600(2)
Methoxychlor	<200	<500	<200	<100	<10	<10	<10	<200	<10	<10	<10	<100

(1) = Compound confirmed by secondary column.

(2) = High concentrations may mask the presence of other components in sample.

(3) = Spike and/or surrogate recoveries could not be calculated due to sample dilution.

(4) = Compound could not be quantified due to presence of technical chlordane.

All results presented in ug/kg.

TABLE 1-2
SUMMARY OF NOVEMBER 17, 1993 SOIL SAMPLE ANALYTICAL RESULTS
CHEVRON ORLANDO
Page 4 of 4

SAMPLE LOCATION	TP-SS-35A	TP-SS-35B	TP-SS-36	TP-SS-37	TP-SS-137	TP-SS-38	TP-SS-138	TP-SS-39	TP-SS-40A	TP-SS-40B	TP-SS-41	TP-SS-42
PARAMETER												
a-BHC	<400	<400	<80	<20	<20	<200	<200	<200	<4	<80	14(1)	<4
g-BHC	<400	<400	<80	<20	<20	<200	<200	<200	<4	<80	15(1)	<4
Heptachlor	<800	<800	<160	<40	<40	<400	<400	<400	<8	<160	19(1)	<8
Heptachlor epoxide	<400	<400	<80	<20	35	<200	<200	<200	<4	<80	<4	<4
Endosulfan I	<2000	<2000	<400(4)	<100(4)	<100(4)	<1000	<1000(4)	<1000(4)	<20(4)	<400	<20	<20
Dieldrin	<400	700	110	140	160	250	<200	650	20	240	24(1)	<4
Endrin	<800	<800	<160	<40	<40	<400	<400	<400	<8	160	29(1)	<8
4,4-DDD	<500	<500	220	<25	<25	<250	<250	3000	<5	100	30(1)	<5
4,4-DDT	<500	1600	530	130	130	1300	1100	3300	66	360	<5	<5
4,4-DDE	<400	<400	460	230	240	1100	920	2000	48	460	27(1)	<4
Chlordane	370000(2)	36000(2)	9100(2)	7600(2)	3900(2)	32000(2)	28000(2)	49000(2)	1100(2)	4900(2)	<8	<8
Methoxychlor	<1000	<1000	<200	<50	<50	<500	<500	<500	<10	<200	<10	<10

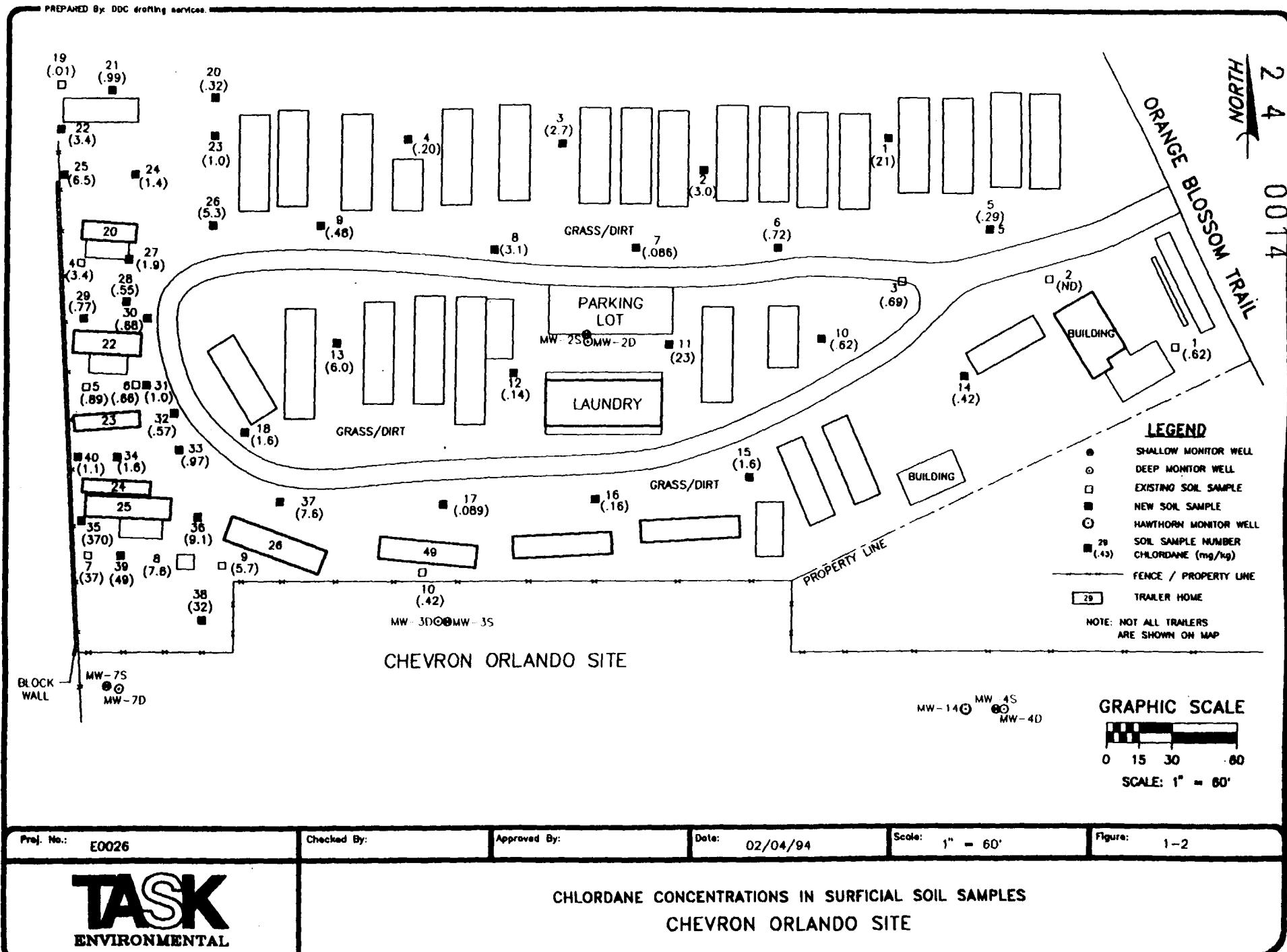
(1) = Compound confirmed by secondary column.

(2) = High concentrations may mask the presence of other components in sample.

(3) = Spike and/or surrogate recoveries could not be calculated due to sample dilution.

(4) = Compound could not be quantified due to presence of technical chlordane.

All results presented in ug/kg.



Proj. No.: E0026

Checked By:

Approved By:

Date: 02/04/94

Scale: 1" = 60'

Figure: 1-2



CHLORDANE CONCENTRATIONS IN SURFICIAL SOIL SAMPLES
CHEVRON ORLANDO SITE

2.0 REMOVAL ACTION

21 WASTE CHARACTERIZATION

A waste characterization sample was collected to facilitate disposal of the soil generated during the Removal Action. One composite soil sample was collected from the southwest corner of the trailer park, to characterize the soil in accordance with 40 CFR Part 261 for disposal. The composite sample was created from equal aliquots of soil, each collected from 0 to 3-inches BLS from six locations. The volatile organic fraction of the sample was generated by placing a fraction of each aliquot directly into the appropriate sample container. The remaining portion of each aliquot was mixed in a decontaminated pyrex pan by the quarter mix method and divided into the appropriate sample containers. The composite sample was analyzed for the characteristics of Toxicity Characteristics Leaching Procedure (TCLP), volatile organic compounds, semivolatile organic compounds, pesticides and metals, in accordance with 40 CFR Part 261.24, and for ignitability, corrosivity, and reactivity. The analytical results for the waste characterization of soil are included in Appendix A. Based on the analytical results, the soil was determined to be solid waste that is not hazardous waste by characteristic. The waste characterization data and a waste profile were submitted to the Waste Management, Inc. Springhill Regional Landfill in Graceville, Florida for acceptance. The EPA also reviewed the disposal facility and determined that it was acceptable for disposal of soils excavated during the Removal Action.

22 COMMUNITY RELATIONS

A public meeting for the Armstrong Trailer Park residents was held on March 17, 1994. Representatives of EPA, Chevron, and TASK met with the trailer park residents to outlined the Removal Action activities and discuss impacts of the construction activities on the specific areas of the park. A Fact Sheet was prepared by EPA staff and distributed to the residents at the meeting.

23 SITE PREPARATION

On March 21, 1994, the decontamination, loading, and staging areas were set up on the site. The fence between the site and the trailer park was removed, and limerock truck haul path was constructed. The water treatment system, which consisted of two 200-pound granular activated carbon canisters, was set up next to the frac tank which contained the pumping test water.

As described below, preliminary soil screening samples were collected to confirm the areal extent of the areas to be excavated. Based on the results of the preliminary soil screening, the residents in trailer no. 24 were temporarily

relocated (by Chevron Chemical Company) due to the proximity of their trailer to the excavation in the southwest corner of the park.

2.3.1 Preliminary Soil Screening

Soil samples were collected under trailers 24, 25 and 26, and screened with the Enzyme Link Immuno-Sorbant Assay (ELISA) method. Figure 2-1 identifies the soil sample locations and presents the corresponding ELISA results. The samples under trailers 25 and 26 identified the presence of chlordane in soil above the 4.9 ppm action level. Trailers 25 and 26 were temporarily relocated to the Chevron site to facilitate soil excavation in this area. Additional surface soil samples were collected around sample locations SS-1, SS-11, SS-13, and SS-25 to determine the horizontal and vertical extent of contamination in these areas. These samples were also analyzed for chlordane content in the field using the ELISA method.

The ELISA method was used for soil screening and verification during the Removal Action at the Armstrong Trailer Park. A 5 gram (g) aliquot of each soil sample was prepared, and mixed with 1 ml of 90% methanol. The sample solution is extracted and added to a test-tube coated with antibodies from rabbits that have been sensitized to cyclodienes. The chlordane in methanol binds to the immobile antibody phase, removing these binding sites from further reaction. A dye is then added to the test-tube, and all sites not bound to chlordane are bound to the dye. Quantification is done by measuring light absorbance by the bound dye with a differential photometer. The process is calibrated using technical grade chlordane standard, and accuracy is typically \pm 20 percent.

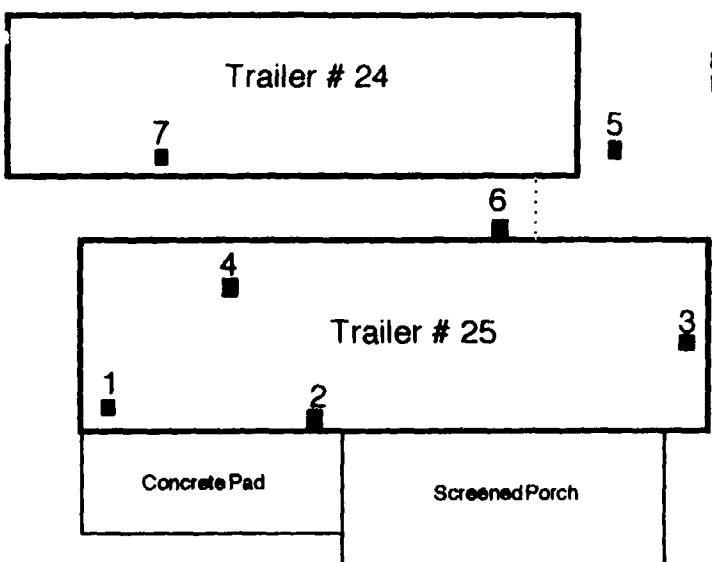
24 SOIL EXCAVATION

As shown in Figure 2-2, five areas within the Armstrong Trailer Park were excavated. Soil samples were collected during the excavation process to determine the extent of contamination, and at the completion of each excavation to verify the removal of contaminated soil. The results for the ELISA analysis are summarized in Table 2-1. Confirmation sample analytical results are summarized in Table 2-2.

Approximately 227 tons of contaminated soil were excavated from the areas within the Armstrong Trailer Park. The excavation was initiated on March 24, 1994 and completed on March 26, 1994. The excavated soil was transported to and disposed of in the Springhill Regional Landfill. Copies of the waste disposal manifests are included in Appendix B.

24.1 Excavations No. 1, 2, and 3

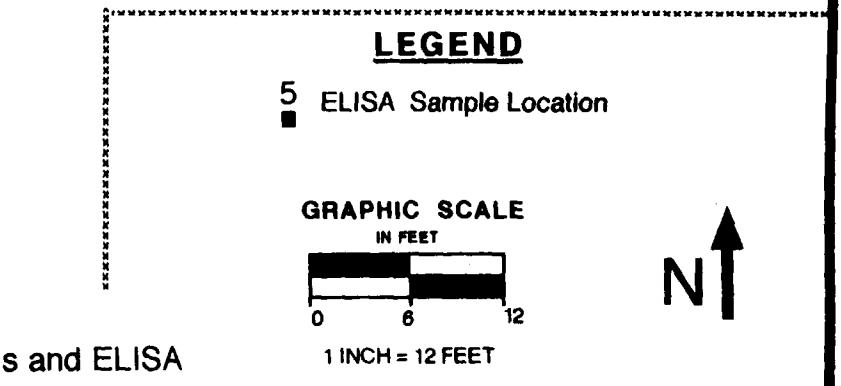
Figures 2-3, 2-4, and 2-5 identify the surface soil sample locations and



Sample No.	Chlordane (ppm)
1	200
2	89.4
3	8.0
4	56.4
5	0.04
6	2.8
7	3.2
8	2.2
9	25.2
10	8.9
11	25.2

TASK
ENVIRONMENTAL

FIGURE 2-1 Initial Soil Screening Locations and ELISA Results Near Excavation No. 5



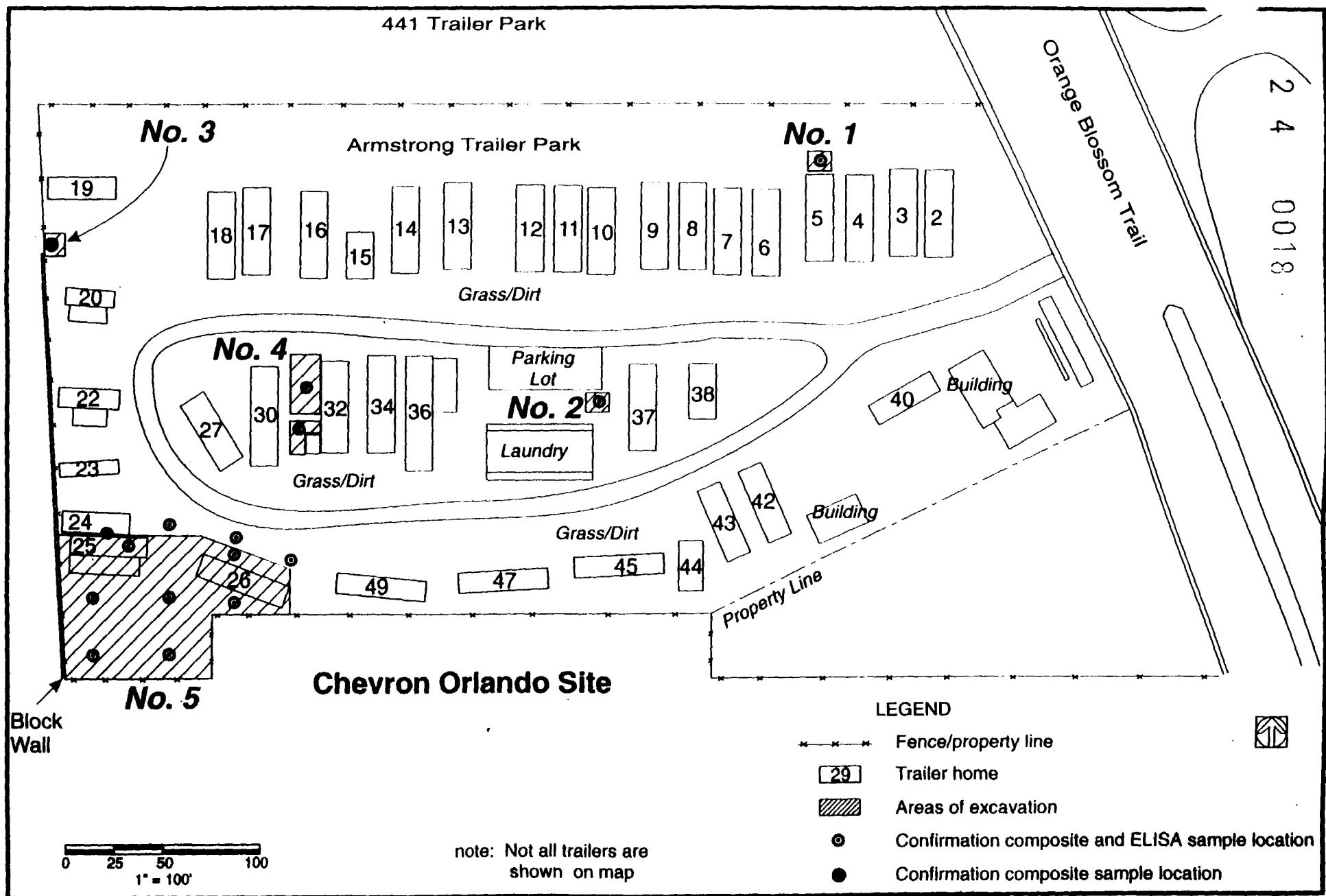


FIGURE 2-2 Armstrong Trailer Park Removal Action Excavation Locations

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TABLE 2-1 ELISA Results for Soil Samples

Chevron Orlando - March 1994

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Sample ID	Optical Density	ppb	Dilution factor x 200	ppm	Sample Location
1	0.29	1000.0	200000	200.00	Excavation No. 5
2	0.60	447.0	89400	89.40	Excavation No. 5
3	0.90	40.0	8000	8.00	Excavation No. 5
4	0.61	282.0	56400	56.40	Excavation No. 5
5	1.37	0.2	40	0.04	Excavation No. 5
6	1.18	14.0	2800	2.80	Excavation No. 5
7	1.15	16.0	3200	3.20	Excavation No. 5
8	1.26	11.0	2200	2.20	Excavation No. 5
9	0.67	126.0	25200	25.20	Excavation No. 5
10	0.90	44.5	8900	8.90	Excavation No. 5
11	0.71	125.9	25180	25.18	Excavation No. 5
12	0.83	16.5	3300	3.30	Excavation No. 3
13	0.83	16.5	3300	3.30	Excavation No. 3
14	0.83	16.5	3300	3.30	Excavation No. 3
15	0.94	7.5	1500	1.50	Excavation No. 3
16	0.71	40.0	8000	8.00	Excavation No. 4
17	0.86	13.2	2640	2.64	Excavation No. 4
18	0.57	105.0	21000	21.00	Excavation No. 4
19	0.52	150.0	30000	30.00	Excavation No. 4
20	1.01	4.7	940	0.94	Excavation No. 2
21	1.01	4.7	940	0.94	Excavation No. 2
22	1.00	4.7	940	0.94	Excavation No. 2
23	1.03	4.0	800	0.80	Excavation No. 2
24	0.18	>1000	>200000	>200	Excavation No. 1
25	1.06	3.3	660	0.66	Excavation No. 1
26	1.03	4.0	800	0.80	Excavation No. 1
27	1.07	3.0	600	0.60	Excavation No. 1
28	0.71	44.0	8800	8.80	Excavation No. 4
29	0.66	60.0	12000	12.00	Excavation No. 4
30	0.87	15.5	3100	3.10	Excavation No. 4
31	1.03	5.5	1100	1.10	Excavation No. 4
32	1.20	1.8	360	0.36	Excavation No. 4
33	0.99	6.8	1360	1.36	Excavation No. 4
34	0.61	84.0	16800	16.80	Excavation No. 5
35	0.81	23.5	4700	4.70	Excavation No. 5
36	0.79	25.5	5100	5.10	Excavation No. 5
36D	0.88	14.0	2800	2.80	Excavation No. 5
37E	1.01	6.4	1280	1.28	Base Excavation No. 1
38E	0.77	30.0	6000	6.00	Sidewalls Excavation No. 1
39E	1.16	2.3	460	0.46	Base Excavation No. 2
40E	1.15	2.4	480	0.48	Sidewalls Excavation No. 2
41F	1.15	2.4	480	0.48	Composite of Backfill
42	0.73	27.0	5400	5.40	Excavation No. 5
43	0.87	11.5	2300	2.30	Excavation No. 5
44	0.50	110.0	22000	22.00	Excavation No. 5

TABLE 2-1 ELISA Results for Soil Samples

Chevron Orlando - March 1994

Page 2 of 2

2 4 0020

Sample ID	Optical Density	Dilution factor			Sample Location
		ppb	x 200	ppm	
45	0.65	44.0	8800	8.80	Excavation No. 5
46	0.86	12.0	2400	2.40	Excavation No. 5
CO-5COM-1	0.75	52.0	10400	10.40	Excavation No. 5
CO-5COM-2	1.09	0.4	84	0.08	Excavation No. 5
CO-5COM-3	1.19	0.2	40	0.04	Excavation No. 5
CO-5COM-4	0.90	20.0	4000	4.00	Excavation No. 5
CO-5COM-5	1.08	0.5	96	0.10	Excavation No. 5
CO-5COM-6	1.15	0.3	62	0.06	Excavation No. 5
CO-5COM-7	0.84	29.0	5800	5.80	Excavation No. 5
CO-5COM-8	1.03	0.7	140	0.14	Excavation No. 5
CO-5COM-9	1.05	0.6	120	0.12	Excavation No. 5
CO-5COM-10	1.24	0.2	32	0.03	Excavation No. 5
CO-5COM-11	1.13	0.3	64	0.06	Excavation No. 5
CO-5COM-1rev	1.14	<10	<2000	<2	Excavation No. 5
CO-5COM-7rev	1.26	<10	<2000	<2	Excavation No. 5
4-1	1.17	10.0	2000	2.00	Excavation No. 4R
4-2	0.99	32.0	6400	6.40	Excavation No. 4R
4-3	1.13	13.0	2600	2.60	Excavation No. 4R
4-4	1.04	24.0	4800	4.80	Excavation No. 4R
4-5	1.15	12.0	2400	2.40	Excavation No. 4R
4-6	0.99	32.0	6400	6.40	Excavation No. 4R
4-7	1.00	33.0	6600	6.60	Excavation No. 4R
4-8	1.03	25.0	5000	5.00	Excavation No. 4R
4-9	1.19	8.0	1600	1.60	Excavation No. 4R
1-1	0.96	6.1	1220	1.22	Excavation No. 1R
4-2r	0.97	6.1	1210	1.21	Excavation No. 4R
4-6r	0.96	6.1	1220	1.22	Excavation No. 4R
4-7r	0.56	60.0	12000	12.00	Excavation No. 4R

TABLE 2-2 Confirmation Soil Samples Collected from Excavations
Chevron Orlando - March 1994

2 4 0021

Sample ID	Chlordane	Units	Sample Location
CO-EXCOM-1-A	1.6	ppm	Base of Excavation No. 1
CO-EXCOM-1-B	6.7	ppm	Side wall of Excavation No. 1
CO-EXCOM-2-A	0.07	ppm	Base of Excavation No. 2
CO-EXCOM-2-B	0.084	ppm	Side wall of Excavation No. 2
CO-EXCOM-3-A	3.1	ppm	Base of Excavation No. 3
CO-EXCOM-3-B	3.5	ppm	Side wall of Excavation No. 3
CO-EXCOM-4-A	12	ppm	Base of Excavation No. 4
CO-EXCOM-4-B	9.7	ppm	Side wall of Excavation No. 4
CO-5COM-1rev	0.44	ppm	Perimeter of Excavation No. 5
CO-5COM-2	0.95	ppm	Perimeter of Excavation No. 5
CO-5COM-3	0.37	ppm	Mini-excavation North of Exc. No. 5
CO-5COM-4	2.8	ppm	Base of Excavation No. 5
CO-5COM-5	0.5	ppm	Base of Excavation No. 5
CO-5COM-6	1.2	ppm	Base of Excavation No. 5
CO-5COM-7rev	0.11	ppm	Base of Excavation No. 5
CO-5COM-8	2	ppm	Base of Excavation No. 5
CO-5COM-9	0.074	ppm	Base of Excavation No. 5
CO-5COM-10	0.28	ppm	Base of Excavation No. 5
CO-5COM-11	2.5	ppm	Perimeter of Excavation No. 5
CO-BF-COM-01	ND	ppm	Backfill inplace at Excavation No. 5
CO-BF-COM-02	0.14	ppm	Backfill inplace at Excavation No. 5
CO-BF-COM-03	ND	ppm	Backfill inplace at Excavation No. 5
CO-BF-COM-04	ND	ppm	Backfill inplace at Excavation No. 5
CO-SS-EX1-COMP	0.15	ppm	Composite of Excavation No. 1 revisited
CO-SS-EX4-COMP	0.54	ppm	Composite of Excavation No. 4 revisited
Verification Duplicates			
CO-SS-VER-1	340	ppm	SW Corner of Trailer #24
CO-SS-VER-11	16	ppm	SE Corner of Trailer #26
CO-SS-VER-12	3.6	ppm	SW Corner of Excavation No. 3
CO-SS-VER-18	22	ppm	W side of Excavation No. 4

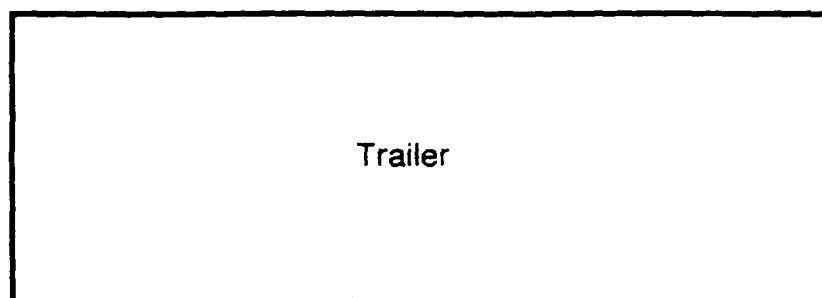
Note: Verification Samples were taken prior to excavation for use as a comparison to ELISA data.

2 4 0022



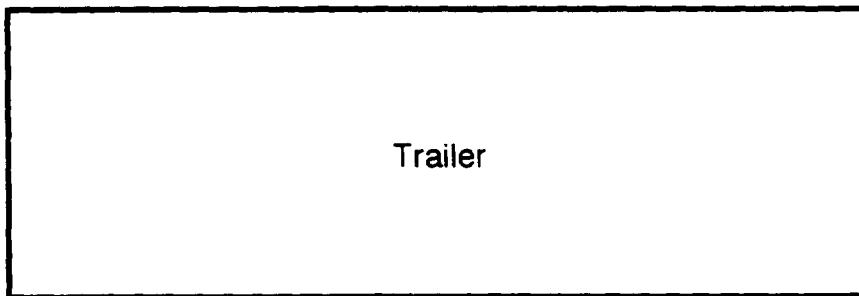
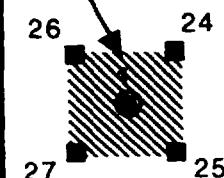
Trailer

GRAPHIC SCALE
IN FEET



Trailer

Excavation No. 1



Trailer

LEGEND

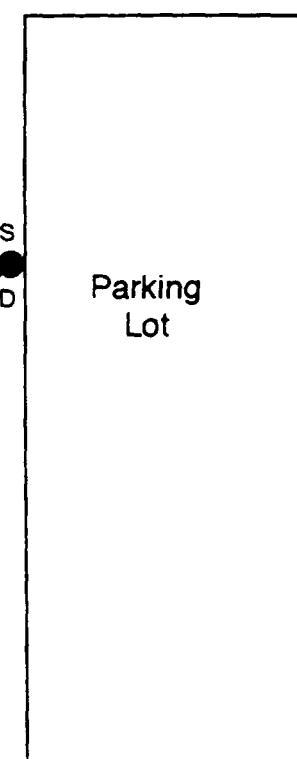
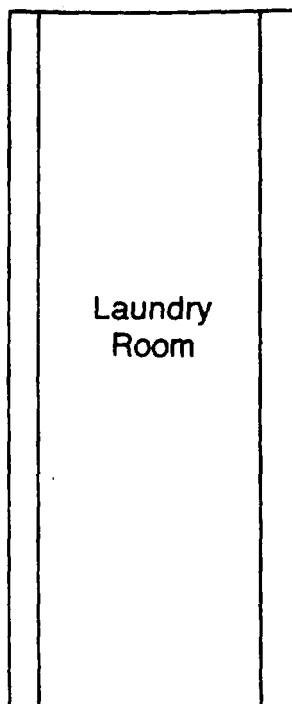
- 24 ELISA Sample Location
- 1 Phase 2b Soil Sample Location

Sample No.	Chlordane (ppm)
24	>200
25	0.66
26	0.80
27	0.60
37E	1.28
38E	6.00

Note: Samples 37E and 38E are Composite Confirmation Samples Collected from the Base and Sidewalls of the Completed Excavation

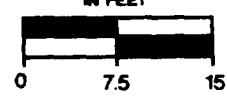
FIGURE 2-3 Excavation No. 1 Soil Screening Locations and ELISA Results

2 4 0023

N
→MW-2S
MW-2D

23 21
 ↓
22 20

Excavation No. 2

**GRAPHIC SCALE**
IN FEET

1 INCH = 15 FEET

LEGEND

21 ■ ELISA Sample Location

11 ● Phase 2b Soil Sample Location

Sample No.	Chlordane (ppm)
20	0.94
21	0.94
22	0.94
23	0.8
39E	0.46
40E	0.48

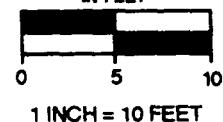
Note: Samples 39E and 40E are Composite Confirmation Samples Collected from the Base and Sidewalls of the Completed Excavation

FIGURE 2-4 Excavation No. 2 Soil Screening Locations and ELISA Results

2 4 0024

N

GRAPHIC SCALE
IN FEET



Excavation No. 3

13
15
25
12
14

Trailer #20

Concrete Block Wall

Road

Sample No.	Chlordane (ppm)
12	3.3
13	3.3
14	3.3
15	1.5

LEGEND

- 12 ELISA Sample Location
- 25 Phase 2b Soil Sample Location

TASK
ENVIRONMENTAL

FIGURE 2-5 Excavation No. 3 Soil Screening Locations and ELISA Results

ELISA results for Excavation No. 1, 2, and 3 respectively. Soil exceeding the 4.9 ppm action level was removed to one-foot BLS, by hand digging. The excavated soil was placed in a wheel barrow, and transferred to the soil stockpile area on the Chevron site. Approximately 1 cubic yard of contaminated soil was removed from each of these excavations.

At the completion of each excavation, confirmation soil samples were collected from the base and sidewalls of each excavation for laboratory analysis by EPA Method 8080. Each confirmation sample was a composite sample, created from equal aliquots of soil collected in four points in the excavation. Each aliquot was mixed in a decontaminated pyrex pan by the quarter mix method and placed into the sample container. The laboratory analytical results are summarized in Table 2-1, and included in Appendix A.

24.2 Excavation No. 4

As shown on Figure 2-6, soil samples were collected at 5-foot intervals around the initial sample point (SS-13), and at 10-foot intervals to the north and south of SS-13 to identify the extent of the excavation. These samples were analyzed in the field using the ELISA method. The excavation was completed to approximately 6-inches BLS, by roto-tilling to loosen the soil and hand digging. Approximately five to ten cubic yards of contaminated soil were removed from this area.

At the completion of the excavation, the decision was made to collect the laboratory confirmation samples and backfill the excavation, prior to verification that PRGs had been met (using the ELISA analysis). This action was taken on Friday evening, March 24, 1994, based on Chevron's concern that an open excavation might present a safety hazard to the residents in the adjacent trailers, and to the children living in the park. The composite soil samples were collected from the base and sidewalls of the excavation. These confirmation samples were sent to Pace, Inc. in Tampa to be analyzed for chlorinated pesticides by EPA Method 8080.

24.3 Excavation No. 5

A Ford 555C back hoe was used for the excavation of this area. The excavation was initiated around the concrete pad for Trailer 25, and continued to the southern boundary of the trailer park. Figure 2-7 shows the extent of the excavation, and identifies the locations of verification samples collected during this phase of the excavation. The ELISA analytical results for these verification samples identified some soil above the 4.9 ppm action level. Soil was excavated from these areas until the action level was achieved. The excavation was completed to approximately 1-foot BLS.

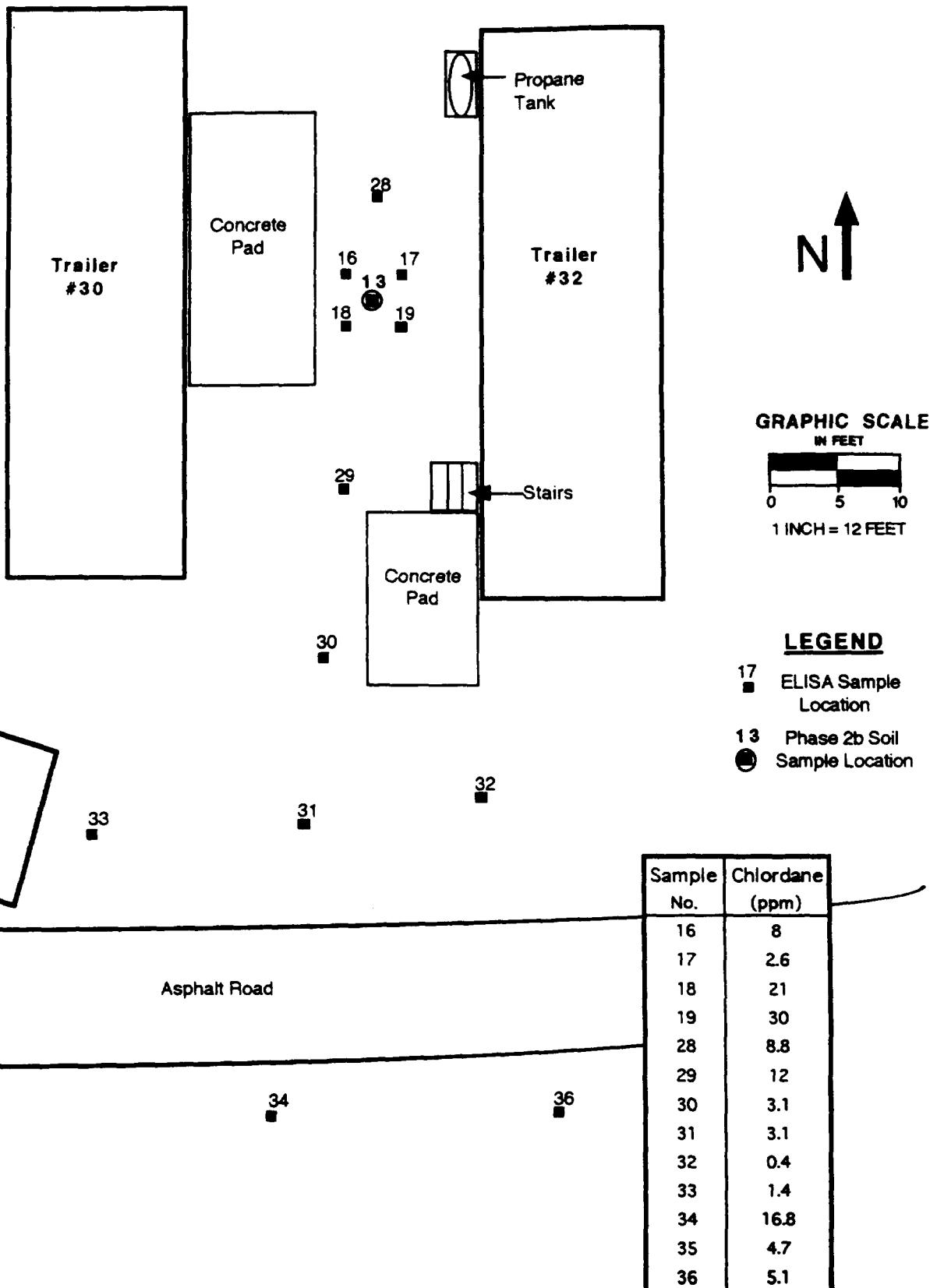


FIGURE 2-6 Excavation No. 4 Soil Screening Locations and ELISA Results

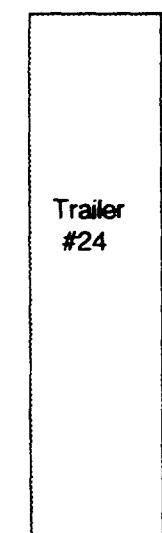
2 4 0027

GRAPHIC SCALE

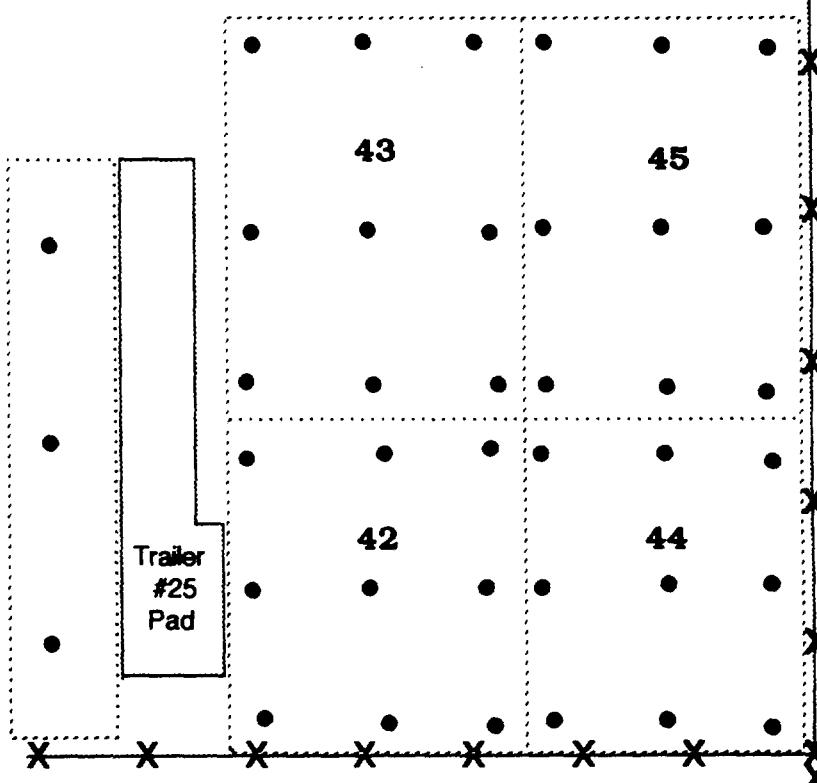


N
←

Sample No.	Chlordane (ppm)
42	5.4
43	2.3
44	22
45	8.8
46	2.4



Trailer
#24



LEGEND

- Portion of Composite
- ELISA Sample

42 Sample Number

TASK
ENVIRONMENTAL

FIGURE 2-7 Excavation No. 5 Soil Screening Locations and ELISA Results

A small oval shaped area was excavated between the road and trailer 26. This area is included as part of Excavation No. 5.

Figure 2-8 shows the final extent of the excavation, and the locations of the confirmation soil samples. The confirmation soil samples were initially screened by ELISA method to verify the excavation endpoint. Two confirmation samples (CO-5COM-1 and CO-5COM-7) identified remaining chlordane in the soil above the action level. These two areas were further excavated and re-sampled for confirmation. The new confirmation sample numbers include a "-rev" after the sample number to indicate a revisited sample location. The confirmation samples were then sent to Pace, Inc. to be analyzed for chlorinated pesticides by EPA Method 8080. Analytical results are included in Appendix C.

24.4 Site Restoration

Following the completion of the excavations, the excavated areas were backfilled with clean sand. Excavation no. 5 was backfilled and compacted, and the trailers put back in place. Concrete footers were poured, and new screened porches constructed. Sod was placed to cover each backfilled area, and new trees were planted in excavation no. 5. A new fence was installed along the southwest border of the park. The restored areas were inspected on May 6, 13, and 26 and on June 3, 1994. The observations made during these inspections were submitted to the EPA on June 6, 1994.

25 DUPLICATE SAMPLING

Select verification samples were chosen from the ELISA samples to be analyzed by Pace, Inc. for organic pesticides by EPA Method 8080, in order to evaluate the accuracy of the ELISA method. The results of these samples are summarized in Table 2-3. The ELISA results are presented for comparison. Laboratory reports from Pace, Inc. are included in Appendix C.

26 WATER TREATMENT AND MANAGEMENT OF DRILL CUTTINGS

The additional Removal Action activities also encompassed treatment of groundwater generated during the Remedial Investigation pumping test and purging of the monitor wells, and disposal of drill cuttings and drilling mud collected in drums during the Remedial Investigation monitor well construction. The groundwater from the pumping test was collected in a 2000-gallon frac tank. The purge water from the monitor wells was collected in 55-gallon drums. The purge water was pumped into the frac tank with the pump test water.

Water treatment was accomplished with a diatomaceous earth filter to remove particulates, followed be filtration through GAC canisters. The treated water was discharged into a second frac tank. The treatment was accomplished in two batches. Each batch was sampled and the samples analyzed for purgeable

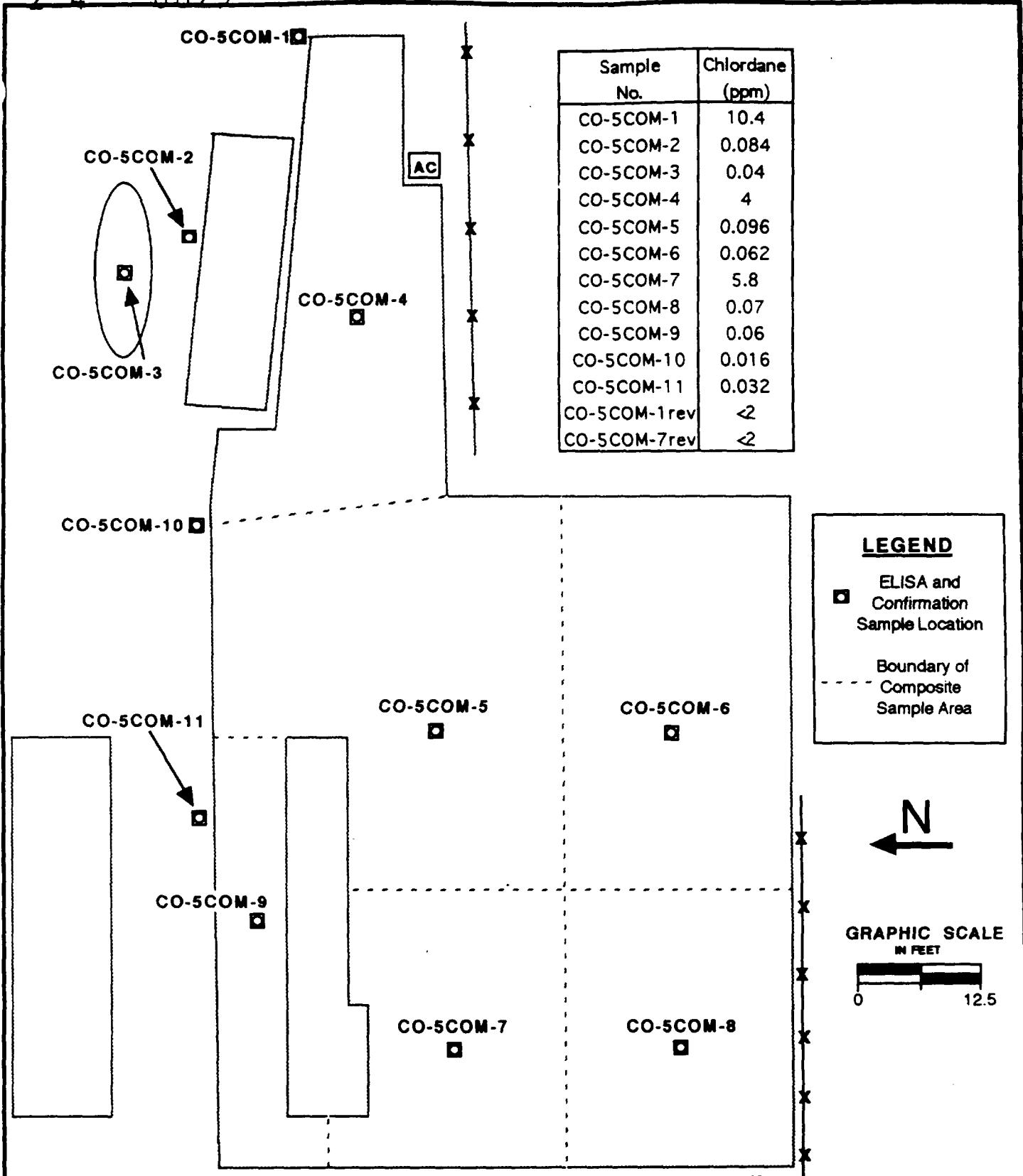


TABLE 2-3 ELISA Comparison to Laboratory Analysis for Soil Samples
Chevron Orlando - March 1994

2 4 0030

Sample ID	Chlordane	ELISA	Units	Sample Location
CO-EXCOM-1-A	1.6	1.3	ppm	Base of Excavation No. 1
CO-EXCOM-1-B	6.7	6.0	ppm	Side wall of Excavation No. 1
CO-EXCOM-2-A	0.07	<0.5	ppm	Base of Excavation No. 2
CO-EXCOM-2-B	0.084	<0.5	ppm	Side wall of Excavation No. 2
CO-5COM-1rev	0.44	<2	ppm	Perimeter of Excavation No. 5
CO-5COM-2	0.95	0.084	ppm	Perimeter of Excavation No. 5
CO-5COM-3	0.37	0.04	ppm	Mini-excavation North of Exc. No. 5
CO-5COM-4	2.8	4	ppm	Base of Excavation No. 5
CO-5COM-5	0.5	0.096	ppm	Base of Excavation No. 5
CO-5COM-6	1.2	0.062	ppm	Base of Excavation No. 5
CO-5COM-7rev	0.11	<2	ppm	Base of Excavation No. 5
CO-5COM-8	2	0.14	ppm	Base of Excavation No. 5
CO-5COM-9	0.074	0.12	ppm	Base of Excavation No. 5
CO-5COM-10	0.28	0.032	ppm	Base of Excavation No. 5
CO-5COM-11	2.5	0.064	ppm	Perimeter of Excavation No. 5
CO-SS-VER-1	340	200	ppm	SW Corner of Trailer #25
CO-SS-VER-11	16	25.2	ppm	SE Corner of Trailer #26
CO-SS-VER-12	3.6	3.3	ppm	SW Corner of Excavation No. 3
CO-SS-VER-18	22	21	ppm	W side of Excavation No. 4

2 4 0031

halocarbons and aromatics (EPA Methods 601 and 602); semivolatile organic organophosphate pesticides (EPA Method 614); and select metals. The analytical results (presented in Appendix A) were reviewed and approved by the EPA OSC. No contaminants were detected in either batch of treated water. The treated water was discharged on the site by spray irrigation.

At the completion of the additional Removal Action, vegetation and debris produced during the Removal Action were placed into roll-off boxes, along with the drill cuttings and spent GAC and diatomaceous earth from the water treatment system. This material was also transported to and disposed of in the Springhill Regional Landfill. Approximately 40 tons of material were disposed of in this manner. The empty drums were removed by Enice Drum Services of Aburndale, Florida for cleaning and recycling.

2.7 ADDITIONAL EXCAVATION

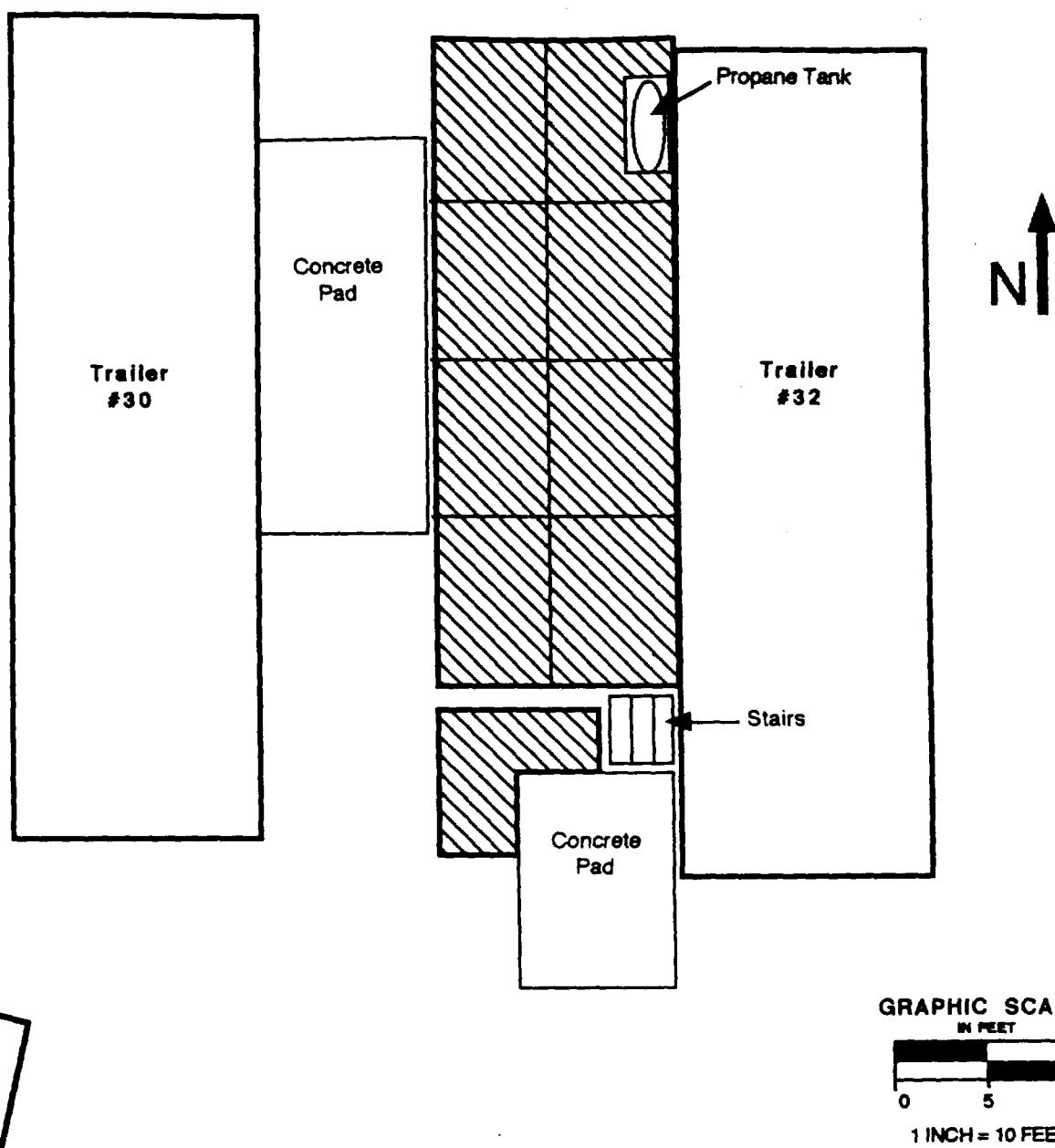
The results of the confirmation sample analyses indicated residual chlordane in concentrations above the action level for Excavations No. 1 and 4. On April 27, 1994, additional soil was hand excavated from Excavations No. 1 and 4. Prior to the excavation of the contaminated soil, the sod was removed from each area, and the previously placed backfill removed and drummed. At the completion of each excavation, verification samples were collected and analyzed using the ELISA method to ensure that the removal goal of 4.9 ppm chlordane was achieved prior to backfilling.

Confirmation samples were collected from each excavation for analysis by Pace, Inc. The composite sample from Excavation No. 1 was made up of equal aliquots of soil collected from two locations on each sidewall, and from two locations in the base of the excavation. Chlordane was detected in a concentration of 0.150 mg/kg in the Excavation No. 1 confirmation sample (sample number CO-SS-EX1-COMP). The composite sample from Excavation No. 4 was made up of equal aliquots of soil collected from three locations within each excavation grid (as shown on Figure 2-9), and from ten locations around the perimeter of the excavation. Chlordane was detected in a concentration of 0.540 ppm in the Excavation No. 4 confirmation sample (sample number CO-SS-EX4-COMP). The analytical results for these samples are presented in Appendix C.

The excavated soil was placed in drums and transported to the Springhill Regional Landfill for disposal. Each excavation was backfilled with clean soil, and covered with new sod.

2 4 0032

Asphalt Road



LEGEND



FIGURE 2-9 Excavation No. 4 (Revisited) Area of Excavation

3.0 SUMMARY AND CONCLUSIONS

3.1 SUMMARY

Additional Removal Action activities were conducted at the Armstrong Trailer Park to remove soil contaminated with chlordane from five locations within the park. The Removal Action also encompasses management of Remedial Investigation derived pumping test and purge water, and drill cuttings. The additional Removal Action was conducted in accordance with the Removal Action Plan Amendment for the Chevron Chemical Company Site (TASK, 1994).

The Removal Action was initiated on March 17, 1994 with a public meeting with residents of the Armstrong Trailer Park. On March 21, 1994, the decontamination, staging and loading areas were established, and the fence and vegetation between the Chevron site and the trailer park removed. Preliminary soil screening analysis identified the need to relocate trailers no. 25 and 26. Excavation of soil was conducted from March 24 to March 26, 1994, with the removal of approximately 227 tons of contaminated soil. The excavated soil was transported to the Springhill Regional Landfill in Graceville, Florida for disposal.

The excavated areas were restored with clean backfill and sod. Trailers no. 25 and 26 were put back in place, with new tires, concrete footers, and screened porches. Several trees were planted behind trailer no. 25, and a new fence was installed between the site and the park.

Approximately 6000 gallons of pumping test and purge water were treated with a diatomaceous earth filter and GAC filters. The treated groundwater was discharged on the Chevron site through spray irrigation. Drill cuttings were transferred from 55-gallon drums into roll-off containers, along with debris and the spent GAC, and transported to the Springhill Regional Landfill for disposal.

3.2 CONCLUSIONS

The additional Removal Action activities successfully met the Removal Action goal by excavation and off-site disposal of soil with chlordane concentrations in excess of 4.9 mg/kg (ppm). The analytical results for the confirmation samples, and samples of the backfill material demonstrate that the goal was met. These results are summarized in Table 3-1.

2 4 0034

**Table 3-1 Summary of Soil Sample Confirmation Data
Chevron Orlando**

EXCAVATION	SAMPLE ID	CHLORDANE CONCENTRATION (ppm)
Excavation No. 1	CO-SS-EX1-COMP	0.15
Excavation No. 2	CO-EXCOM-2-A	0.07
	CO-EXCOM-2-B	0.084
Excavation No. 3	CO-EXCOM-3-A	3.1
	CO-EXCOM-3-B	3.5
Excavation No. 4	CO-SS-EX4-COMP	0.54
Excavation No. 5	CO-5COM-1rev	0.44
	CO-5COM-2	0.95
	CO-5COM-3	0.37
	CO-5COM-4	2.8
	CO-5COM-6	0.5
	CO-5COM-7rev	1.2
	CO-5COM-8	0.11
	CO-5COM-9	0.075
	CO-5COM-10	0.28
	CO-5COM-11	2.5
Clean Backfill (in place)	CO-BF-COM-01	ND
	CO-BF-COM-02	0.14
	CO-BF-COM-03	ND
	CO-BF-COM-04	ND

ND = not detected.

2 4 0035

**APPENDIX A
WASTE CHARACTERIZATION ANALYTICAL RESULTS**

2 4 0036

**ANALYSIS DATED MARCH 10, 1994
WASTE CHARACTERIZATION SAMPLE
COMPOSITE SOIL FROM AREAS TO BE EXCAVATED**



2 4 0037

REPORT OF LABORATORY ANALYSIS

March 10, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240228.573
Client Reference: Chevron Orlando

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received February 28, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Jock".

Chris Jock
Project Manager

Enclosures



2 4 0038

REPORT OF LABORATORY ANALYSISTask Environmental
710 South Howard Avenue

Tampa, FL 33606

March 10, 1994

PACE Project Number: 24022857

Attn: Ms. Susan Tobin

Client Reference: Chevron Orlando

PACE Sample Number: 90 0392940
Date Collected: 02/25/94
Date Received: 02/28/94
CO-BG

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>MC-01</u>	<u>DATE ANALYZED</u>
------------------	--------------	------------	--------------	----------------------

SUBCONTRACT ANALYSIS**INDIVIDUAL PARAMETERS**

Cyanide, Reactive	mg/kg	0.50	ND	03/06/94
Sulfide, Reactive	mg/kg	5.0	ND	03/06/94

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Corrosivity (pH)	SU	7.7	03/08/94
Flash Point	Degrees F 1	GT 200	03/08/94
TCLP - Metals/Organic Extraction		03/01/94	



2 4 0039

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 2March 10, 1994
PACE Project Number: 2402285

Client Reference: Chevron Orlando

PACE Sample Number: 90 0392958
Date Collected: 02/25/94
Date Received: 02/28/94
Client Sample ID: CO-BG
NC-01

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Leachate</u>	<u>DATE ANALYZED</u>
			(1)	

INORGANIC ANALYSIS**TCLP METALS**

Arsenic - TCLP	mg/L	0.5	ND	03/04/94
Barium - TCLP	mg/L	0.3	0.7	03/04/94
Cadmium - TCLP	mg/L	0.01	ND	03/04/94
Chromium - TCLP	mg/L	0.05	ND	03/04/94
Lead - TCLP	mg/L	0.1	ND	03/04/94
Mercury - TCLP	ug/L	2.0	ND	03/08/94
Selenium - TCLP	mg/L	0.5	ND	03/04/94
Silver - TCLP	mg/L	0.02	ND	03/04/94
Date Digested - Mercury				03/07/94

ORGANIC ANALYSIS**TCLP - GC/MS VOLATILE ORGANIC COMPOUNDS**

TCLP - Vinyl Chloride	ug/L	80	ND	03/08/94
TCLP - 1,1-Dichloroethene	ug/L	50	ND	03/08/94
TCLP - 2-Butanone (MEK)	ug/L	2000	ND	03/08/94
TCLP - Chloroform	ug/L	100	ND	03/08/94
TCLP - Carbon Tetrachloride	ug/L	50	ND	03/08/94
TCLP - Benzene	ug/L	60	ND	03/08/94
TCLP - 1,2-Dichloroethane	ug/L	100	ND	03/08/94
TCLP - Trichloroethene	ug/L	90	ND	03/08/94
TCLP - Tetrachloroethene	ug/L	90	ND	03/08/94
TCLP - Chlorobenzene	ug/L	130	ND	03/08/94
TCLP - 1,4-Dichlorobenzene	ug/L	100	ND	03/08/94

TCLP PESTICIDES

Date Extracted				03/03/94
g-BHC	ug/L	0.25	ND	03/07/94
Endrin	ug/L	0.50	ND	03/07/94
Methoxychlor	ug/L	2.5	ND	03/07/94
Toxaphene	ug/L	15	ND	03/07/94
Chlordane	ug/L	5.0	ND	03/07/94
Heptachlor	ug/L	0.25	ND	03/07/94



2 4 0040

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 3March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

PACE Sample Number: 90 0392958
Date Collected: 02/25/94
Date Received: 02/28/94
Client Sample ID: CO-BG
WC-01

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Leachate</u>	<u>DATE ANALYZED</u>
			(1)	

ORGANIC ANALYSIS**TCLP PESTICIDES**

Heptachlor epoxide	ug/L	0.25	ND	03/07/94
--------------------	------	------	----	----------

TCLP BASE/NEUTRAL EXTRACTABLES

Date Extracted				03/04/94
2,4-Dinitrotoluene	ug/L	50	ND	03/05/94
Hexachlorobenzene	ug/L	50	ND	03/05/94
Hexachlorobutadiene	ug/L	50	ND	03/05/94
Hexachloroethane	ug/L	50	ND	03/05/94
Nitrobenzene	ug/L	50	ND	03/05/94
Pyridine	ug/L	50	ND	03/05/94

TCLP ACID EXTRACTABLES

Date Extracted				03/04/94
o-Cresol	ug/L	50	ND	03/05/94
m-Cresol	ug/L	50	ND	03/05/94
p-Cresol	ug/L	50	ND	03/05/94
Cresols, Total	ug/L	50	ND	03/05/94
Pentachlorophenol	ug/L	50	ND	03/05/94
2,4,5-Trichlorophenol	ug/L	50	ND	03/05/94
2,4,6-Trichlorophenol	ug/L	50	ND	03/05/94

TCLP CHLOROPHENOXYS

8150 Date Extracted				03/07/94
2,4-D	ug/L	5.5	ND	03/07/94
Silvex	ug/L	0.5	ND	03/07/94
2,4-Dichlorophenylacetic acid-Surrogate	%	1	88	03/07/94



2 4 0041

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 4

March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic Chemistry

Michael W. Palmer
Manager, Organic Chemistry



2 4 0042

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin

Page 5

FOOTNOTES

for pages 1 through 4

March 10, 1994

PACE Project Number: 2402285

Client Reference: Chevron Orlando

GT Greater than.

ND Not detected at or above the PRL.

PRL PACE Reporting Limit

(1) All analysis performed on Toxic Characteristic Leachate.



2 4 0043

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 6**QUALITY CONTROL DATA**March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

Arsenic - TCLP
Batch: 90 49623
Samples: 90 0392958**METHOD BLANK:**

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Arsenic - TCLP	mg/L	0.5	ND
Barium - TCLP	mg/L	0.3	ND
Cadmium - TCLP	mg/L	0.01	ND
Chromium - TCLP	mg/L	0.05	ND
Lead - TCLP	mg/L	0.1	ND
Selenium - TCLP	mg/L	0.5	ND
Silver - TCLP	mg/L	0.02	ND

SPIKE:

			900392958	
			CO-BG	
			WC-01	
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Leachate</u>	<u>Spike</u>
Arsenic - TCLP	mg/L	0.5	ND	2
Barium - TCLP	mg/L	0.3	0.7	0.6
Cadmium - TCLP	mg/L	0.01	ND	0.6
Chromium - TCLP	mg/L	0.05	ND	0.6
Lead - TCLP	mg/L	0.1	ND	2
Selenium - TCLP	mg/L	0.5	ND	1
Silver - TCLP	mg/L	0.02	ND	0.6

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recy</u>
Barium - TCLP	mg/L	0.3	1	96%
Cadmium - TCLP	mg/L	0.01	1	92%
Chromium - TCLP	mg/L	0.05	1	93%
Lead - TCLP	mg/L	0.1	1	91%
Selenium - TCLP	mg/L	0.5	1	75%
Silver - TCLP	mg/L	0.02	1	94%



2 4 0044

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 7**QUALITY CONTROL DATA**March 10, 1994
PACE Project Number: 2402285

Client Reference: Chevron Orlando

Corrosivity (pH)
Batch: 90 49699
Samples: 90 0392940**SAMPLE DUPLICATE:**

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	
Corrosivity (pH)	SU	7.7	900392940 CO-BG HC-01	Duplicate of 90 0392940 RF

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	<u>Value</u>	<u>Recv</u>
Corrosivity (pH)	SU	7.30	7.30	100%	



2 4 OC45

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 8

QUALITY CONTROL DATA

March 10, 1994

PACE Project Number: 24022857

Client Reference: Chevron Orlando

Flash Point
Batch: 90 49698
Samples: 90 0392940

SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Duplicate of</u>	<u>RP</u>
Flash Point	Degrees F	1	900394098 90 0394098	124 3
			120	

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Flash Point	Degrees F	1	80	103%



2 4 0046

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 9**QUALITY CONTROL DATA**March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

Mercury - TCLP
Batch: 90 49681
Samples: 90 0392958**METHOD BLANK:**

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>
Mercury - TCLP	ug/L	2.0	<u>Blank</u> ND

SPIKE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Leachate</u>	<u>Spike</u>	<u>Spike</u>
Mercury - TCLP	ug/L	2.0	ND	20	104%

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	<u>Value</u>	<u>Recy</u>
Mercury - TCLP	ug/L	2.0	4	4	111%



2 4 0047

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 10

QUALITY CONTROL DATA

March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

TCLP - GC/MS VOLATILE ORGANIC COMPOUNDS
Batch: 90 49690
Samples: 90 0392958

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
TCLP - Vinyl Chloride	ug/L	80	ND
TCLP - 1,1-Dichloroethene	ug/L	50	ND
TCLP - 2-Butanone (MEK)	ug/L	2000	ND
TCLP - Chloroform	ug/L	100	ND
TCLP - Carbon Tetrachloride	ug/L	50	ND
TCLP - Benzene	ug/L	60	ND
TCLP - 1,2-Dichloroethane	ug/L	100	ND
TCLP - Trichloroethene	ug/L	90	ND
TCLP - Tetrachloroethene	ug/L	90	ND
TCLP - Chlorobenzene	ug/L	130	ND
TCLP - 1,4-Dichlorobenzene	ug/L	100	ND

SPIKE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	900392958		
			Leachate	Spike	Spike Recy
			WC-01	CO-BG	
TCLP - Vinyl Chloride	ug/L	80	ND	2000	90%
TCLP - 1,1-Dichloroethene	ug/L	50	ND	2000	85%
TCLP - Chloroform	ug/L	100	ND	2000	100%
TCLP - Carbon Tetrachloride	ug/L	50	ND	2000	90%
TCLP - Benzene	ug/L	60	ND	2000	95%
TCLP - 1,2-Dichloroethane	ug/L	100	ND	2000	85%
TCLP - Trichloroethene	ug/L	90	ND	2000	100%
TCLP - Tetrachloroethene	ug/L	90	ND	2000	95%
TCLP - Chlorobenzene	ug/L	130	ND	2000	90%
TCLP - 1,4-Dichlorobenzene	ug/L	100	ND	2000	95%



2 4 0048

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 11**QUALITY CONTROL DATA**March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

TCLP - GC/MS VOLATILE ORGANIC COMPOUNDS

Batch: 90 49690

Samples: 90 0392958

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
TCLP - Vinyl Chloride	ug/L	0.8	20	90%
TCLP - 1,1-Dichloroethene	ug/L	0.5	20	85%
TCLP - Chloroform	ug/L	1.0	20	105%
TCLP - Carbon Tetrachloride	ug/L	0.5	20	95%
TCLP - Benzene	ug/L	0.6	20	95%
TCLP - 1,2-Dichloroethane	ug/L	1.0	20	90%
TCLP - Trichloroethene	ug/L	0.9	20	95%
TCLP - Tetrachloroethene	ug/L	0.9	20	90%
TCLP - Chlorobenzene	ug/L	1.3	20	90%
TCLP - 1,4-Dichlorobenzene	ug/L	1.0	20	100%



2 4 0049

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

TCLP ACID EXTRACTABLES
Batch: 90 49644
Samples: 90 0392958

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
o-Cresol	ug/L	10	ND
m-Cresol	ug/L	10	ND
p-Cresol	ug/L	10	ND
Cresols, Total	ug/L	10	ND
Pentachlorophenol	ug/L	10	ND
2,4,5-Trichlorophenol	ug/L	10	ND
2,4,6-Trichlorophenol	ug/L	10	ND

SPIKE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Leachate</u>	<u>Spike</u>	<u>Spike Recv</u>
o-Cresol	ug/L	10	ND DS	100	75%
m-Cresol	ug/L	10	ND DS	100	75%
p-Cresol	ug/L	10	ND DS	100	74%
Cresols, Total	ug/L	10	ND DS	300	75%
Pentachlorophenol	ug/L	10	ND DS	100	94%
2,4,5-Trichlorophenol	ug/L	10	ND DS	100	73%
2,4,6-Trichlorophenol	ug/L	10	ND DS	100	79%

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
o-Cresol	ug/L	10	50	86%
p-Cresol	ug/L	10	50	48%
Cresols, Total	ug/L	10	100	67%
Pentachlorophenol	ug/L	10	50	50%
2,4,5-Trichlorophenol	ug/L	10	50	86%
2,4,6-Trichlorophenol	ug/L	10	50	88%



2 4 0050

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

March 10, 1994

PACE Project Number: 24022857

Client Reference: Chevron Orlando

TCLP BASE/NEUTRAL EXTRACTABLES

Batch: 90 49645

Samples: 90 0392958

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
2,4-Dinitrotoluene	ug/L	10	ND
Hexachlorobenzene	ug/L	10	ND
Hexachlorobutadiene	ug/L	10	ND
Hexachloroethane	ug/L	10	ND
Nitrobenzene	ug/L	10	ND
Pyridine	ug/L	10	ND

SPIKE:

			900392958	
			CO-BG	
			WC-01	Spike
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Leachate</u>	<u>Spike</u>
2,4-Dinitrotoluene	ug/L	10	ND DS	100 61%
Hexachlorobenzene	ug/L	10	ND DS	100 65%
Hexachlorobutadiene	ug/L	10	ND DS	100 41%
Hexachloroethane	ug/L	10	ND DS	100 39%
Nitrobenzene	ug/L	10	ND DS	100 73%
Pyridine	ug/L	10	ND DS	100 112%

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
2,4-Dinitrotoluene	ug/L	10	50	84%
Hexachlorobenzene	ug/L	10	50	98%
Hexachlorobutadiene	ug/L	10	50	62%
Hexachloroethane	ug/L	10	50	54%
Nitrobenzene	ug/L	10	50	68%



2 4 0051

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

TCLP CHLOROPHENOXYS
Batch: 90 49696
Samples: 90 0392958

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
2,4-D	ug/L	5.5	ND
Silvex	ug/L	0.5	ND
2,4-Dichlorophenylacetic acid-Surrogate	%	1	88

SPIKE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Leachate</u>	<u>Spike</u>	<u>Spike Recv</u>
2,4-D	ug/L	5.5	ND	25	92%
Silvex	ug/L	0.5	ND	2.5	96%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
2,4-D	ug/L	5.5	25	60%	68%	13%
Silvex	ug/L	0.5	2.5	72%	80%	11%



24 0052

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 15**QUALITY CONTROL DATA**March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

TCLP PESTICIDES
Batch: 90 49693
Samples: 90 0392958**METHOD BLANK:**

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
g-BHC	ug/L	0.05	ND
Endrin	ug/L	0.1	ND
Methoxychlor	ug/L	0.5	ND
Toxaphene	ug/L	3.0	ND
Chlordane	ug/L	1.0	ND
Heptachlor	ug/L	0.05	ND
Heptachlor epoxide	ug/L	0.05	ND

SPIKE:

			900392958	
			CO-BG	
			WC-01	
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Leachate</u>	<u>Spike</u>
g-BHC	ug/L	0.050	ND DS	
g-BHC	ug/L	0.25		2.0 103%
Endrin	ug/L	0.10	ND DS	
Endrin	ug/L	0.50		2.0 97%
Methoxychlor	ug/L	0.50	ND DS	
Methoxychlor	ug/L	2.5		2.0 99%
Heptachlor	ug/L	0.050	ND DS	
Heptachlor	ug/L	0.25		2.0 99%
Heptachlor epoxide	ug/L	0.050	ND DS	
Heptachlor epoxide	ug/L	0.25		2.0 91%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Dupl Recv RPD</u>
g-BHC	ug/L	0.05	2.0	101%	100% 1%
Endrin	ug/L	0.1	2.0	115%	105% 9%
Heptachlor	ug/L	0.05	2.0	94%	98% 4%
Heptachlor epoxide	ug/L	0.05	2.0	100%	104% 4%



2 4 0053

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 16

FOOTNOTES
for pages 6 through 15

March 10, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

DS Concentration found on diluted sample.
ND Not detected at or above the PRL.
PRL PACE Reporting Limit
RPD Relative Percent Difference



2 4 0054

REPORT OF LABORATORY ANALYSIS

March 11, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240228.572
Client Reference: Chevron Orlando

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received February 25, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Chris Jock
Project Manager

Enclosures

SEARCHED
INDEXED
MAY 12 1994
FILED



2 4 0055

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

March 11, 1994
PACE Project Number: 24022857

Attn: Ms. Susan Tobin

Client Reference: Chevron Orlando

PACE Sample Number: 90 0391439

Date Collected: 02/25/94

Date Received: 02/25/94

CO-BG

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>HC-01</u>	<u>DATE ANALYZED</u>
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SUBCONTRACT ANALYSIS**INDIVIDUAL PARAMETERS**

Total Organic Halides	ug/L	13	ND	03/10/94
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These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic Chemistry



2 4 0056

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 2FOOTNOTES
for page 1March 11, 1994
PACE Project Number: 24022857

Client Reference: Chevron Orlando

ND Not detected at or above the PRL.
PRL PACE Reporting Limit

2 4 0057

**ANALYSIS DATED NOVEMBER 23, 1993
PRETREATMENT PUMPING TEST WATER**

November 23, 1993

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 231021.573
Client Reference: CHEVRON ORLANDO PHASE II

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received October 26, 1993.

Footnotes are given at the end of the report.

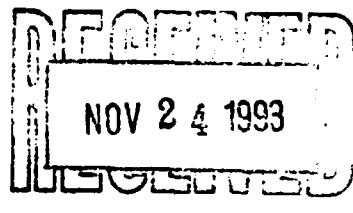
This is reissued report. The original issue date was November 5, 1993.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,


Chris Jock
Project Manager

Enclosures



Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



2 4

0059

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

November 23, 1993
PACE Project Number: 23102157

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number: 90 0339852

Date Collected: 10/25/93

Date Received: 10/26/93

Client Sample ID: CO-GW

PT-01

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>2040-2044 DATE ANALYZED</u>
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Arsenic EPA 206.2	ug/L	10	ND	11/02/93
Chromium	ug/L	5	ND	11/01/93
Lead EPA 239.2	ug/L	5	ND	10/27/93

ORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Ethion	ug/L	5.0	ND	11/02/93
Malathion	ug/L	5.0	ND	11/02/93
Parathion Ethyl	ug/L	5.0	ND	11/02/93

8010/8020 VOLATILE HALOCARBONS/AROMATICS

Chloromethane	ug/L	2.4	ND	10/29/93
Bromomethane	ug/L	4.0	ND	10/29/93
Dichlorodifluoromethane	ug/L	2.1	ND	10/29/93
Vinyl Chloride	ug/L	0.8	ND	10/29/93
Chloroethane	ug/L	1.4	ND	10/29/93
Methylene chloride	ug/L	5.0	ND	10/29/93

Trichlorofluoromethane	ug/L	0.5	ND	10/29/93
1,1-Dichloroethylene	ug/L	0.5	ND	10/29/93
1,1-Dichloroethane	ug/L	0.6	0.7 (1)	10/29/93
trans-1,2-Dichloroethylene	ug/L	0.8	ND	10/29/93
Chloroform	ug/L	1.0	ND	10/29/93
1,2-Dichloroethane	ug/L	1.0	ND	10/29/93

1,1,1-Trichloroethane	ug/L	0.8	ND	10/29/93
Carbon Tetrachloride	ug/L	0.5	ND	10/29/93
Bromodichloromethane	ug/L	0.6	ND	10/29/93
1,2-Dichloropropane	ug/L	0.5	ND	10/29/93
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND	10/29/93
1,1,2-Trichloroethylene	ug/L	0.9	ND	10/29/93

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125

Ms. Susan Tobin
 Page 2

November 23, 1993
 PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0339852		
Date Collected:	10/25/93		
Date Received:	10/26/93		
Client Sample ID:	CO-GW PT-01		
<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>2040-2044 DATE ANALYZED</u>

ORGANIC ANALYSIS

8010/8020 VOLATILE HALOCARBONS/AROMATICS

Dibromochloromethane	ug/L	1.0	ND	10/29/93
1,1,2-Trichloroethane	ug/L	1.0	ND	10/29/93
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND	10/29/93
Bromoform	ug/L	2.0	ND	10/29/93
1,1,2,2-Tetrachloroethane	ug/L	0.4	ND	10/29/93
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND	10/29/93
Methyl Tert-Butyl Ether	ug/L	5.0	ND	10/29/93
Benzene	ug/L	0.6	ND	10/29/93
Toluene	ug/L	1.0	ND	10/29/93
Chlorobenzene	ug/L	1.3	ND	10/29/93
Ethylbenzene	ug/L	0.9	ND	10/29/93
Xylenes	ug/L	0.9	ND	10/29/93
1,3-Dichlorobenzene	ug/L	1.1	ND	10/29/93
1,4-Dichlorobenzene	ug/L	1.0	ND	10/29/93
1,2-Dichlorobenzene	ug/L	1.0	ND	10/29/93
Total VOA	ug/L	0.6	ND	10/29/93

8080- ORGANOCHLORINE PESTICIDES AND PCB'S

Date Extracted-Pesticides/PCBS		10/27/93		
a-BHC	ug/L	0.05	1.6	11/03/93
b-BHC	ug/L	0.05	4.0	11/03/93
g-BHC	ug/L	0.05	1.2	11/03/93
d-BHC	ug/L	0.05	7.8	11/03/93
Heptachlor	ug/L	0.05	ND	11/03/93
Aldrin	ug/L	0.05	ND	11/03/93
Heptachlor epoxide	ug/L	0.05	ND	11/03/93
Endosulfan I	ug/L	0.05	ND	11/03/93
Dieldrin	ug/L	0.1	ND	11/03/93
Endrin	ug/L	0.1	ND	11/03/93
4,4-DDD	ug/L	0.1	ND	11/03/93
Endosulfan II	ug/L	0.1	ND	11/03/93

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November 23, 1993
 PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0339852
Date Collected:	10/25/93
Date Received:	10/26/93
Client Sample ID:	CO-GW PT-01

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

8080- ORGANOCHLORINE PESTICIDES AND PCB'S

4,4-DDT	ug/L	0.1	ND	11/03/93
4,4-DDE	ug/L	0.1	ND	11/03/93
Endrin aldehyde	ug/L	0.1	ND	11/03/93
Endosulfan sulfate	ug/L	0.1	ND	11/03/93
Chlordane	ug/L	1.0	ND	11/03/93
Methoxychlor	ug/L	0.5	ND	11/03/93
Toxaphene	ug/L	3.0	ND	11/03/93
PCB-1016	ug/L	0.5	ND	11/03/93
PCB-1221	ug/L	0.5	ND	11/03/93
PCB-1232	ug/L	0.5	ND	11/03/93
PCB-1242	ug/L	0.1	ND	11/03/93
PCB-1248	ug/L	0.1	ND	11/03/93
PCB-1254	ug/L	0.5	ND	11/03/93
PCB-1260	ug/L	0.5	ND	11/03/93
2,4,5,6-Tetrachloro m-xylene - surrogate	ug/L	0.1	78	11/03/93

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Date Extracted				10/30/93
Dichlorvos	ug/L	5.0	ND	11/02/93
Mevinphos	ug/L	5.0	ND	11/02/93
Demeton-S	ug/L	5.0	ND	11/02/93
Ethoprop	ug/L	5.0	ND	11/02/93
Naled	ug/L	5.0	ND	11/02/93
Phorate	ug/L	5.0	ND	11/02/93
Demeton-O	ug/L	5.0	ND	11/02/93
Diazinon	ug/L	5.0	ND	11/02/93
Disulfoton	ug/L	5.0	ND	11/02/93
Parathion Methyl	ug/L	5.0	ND	11/02/93
Ronnel	ug/L	5.0	ND	11/02/93
Chlorpyrifos	ug/L	5.0	ND	11/02/93
Fenthion	ug/L	5.0	ND	11/02/93



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REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 4November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number: 90 0339852

Date Collected: 10/25/93

Date Received: 10/26/93

Client Sample ID: CO-GW

PT-01

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS**ORGANOPHOSPHORUS PESTICIDES (EPA 8140)**

Fensulfothion	ug/L	5.0	ND	11/02/93
Trichloronate	ug/L	5.0	ND	11/02/93
Stirophos	ug/L	5.0	ND	11/02/93
Tokuthion	ug/L	5.0	ND	11/02/93
Merphos	ug/L	5.0	ND	11/02/93
Bolstar	ug/L	5.0	ND	11/02/93
Azinphos Methyl (Guthion)	ug/L	5.0	ND	11/02/93
Coumaphos	ug/L	5.0	ND	11/02/93
1,3-Dimethyl-2-nitrobenzene	%	0.01	56	11/02/93

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Date Extracted		10/29/93		
Acenaphthene	ug/L	10	ND	11/01/93
Acenaphthylene	ug/L	10	ND	11/01/93
Anthracene	ug/L	10	ND	11/01/93
Benzoic Acid	ug/L	10	ND	11/01/93
Benzo(a)anthracene	ug/L	10	ND	11/01/93
Benzo(a)pyrene	ug/L	10	ND	11/01/93
Benzo(b)fluoranthene	ug/L	10	ND	11/01/93
Benzo(k)fluoranthene	ug/L	10	ND	11/01/93
Benzo(g,h,i)perylene	ug/L	10	ND	11/01/93
Benzyl Alcohol	ug/L	10	ND	11/01/93
4-Bromophenyl phenyl ether	ug/L	10	ND	11/01/93
Butyl benzyl phthalate	ug/L	10	ND	11/01/93
Bis(2-ethyl hexyl)phthalate	ug/L	10	ND	11/01/93
Bis(2-chloroethoxy)methane	ug/L	10	ND	11/01/93
Bis(2-chloroethyl)ether	ug/L	10	ND	11/01/93
Bis(2-chloroisopropyl)ether	ug/L	10	ND	11/01/93
2-Chloronaphthalene	ug/L	10	ND	11/01/93
4-Chloroaniline	ug/L	10	ND	11/01/93
4-Chlorophenyl phenyl ether	ug/L	10	ND	11/01/93

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



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REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 5November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number: 90 0339852
Date Collected: 10/25/93
Date Received: 10/26/93
Client Sample ID: CO-GW
PT-01

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2040-2044 DATE ANALYZED</u>
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ORGANIC ANALYSIS**8270 SEMIVOLATILE ORGANIC COMPOUNDS**

Chrysene	ug/L	10	ND	11/01/93
Dibenzo(a,h)anthracene	ug/L	10	ND	11/01/93
1,2-Dichlorobenzene	ug/L	10	ND	11/01/93
1,3-Dichlorobenzene	ug/L	10	ND	11/01/93
1,4-Dichlorobenzene	ug/L	10	ND	11/01/93
3,3-Dichlorobenzidine	ug/L	10	ND	11/01/93
Dibenzofuran	ug/L	10	ND	11/01/93
Diethyl phthalate	ug/L	10	ND	11/01/93
Dimethyl phthalate	ug/L	10	ND	11/01/93
Di-n-butyl phthalate	ug/L	10	ND	11/01/93
2,4-Dinitrotoluene	ug/L	10	ND	11/01/93
2,6-Dinitrotoluene	ug/L	10	ND	11/01/93
Di-n-octyl phthalate	ug/L	10	ND	11/01/93
Fluoranthene	ug/L	10	ND	11/01/93
Fluorene	ug/L	10	ND	11/01/93
Hexachlorocyclopentadiene	ug/L	10	ND	11/01/93
Hexachlorobenzene	ug/L	10	ND	11/01/93
Hexachlorobutadiene	ug/L	10	ND	11/01/93
Hexachloroethane	ug/L	10	ND	11/01/93
Indeno(1,2,3-c,d)pyrene	ug/L	10	ND	11/01/93
Isophorone	ug/L	10	ND	11/01/93
2-Methylnaphthalene	ug/L	10	ND	11/01/93
Naphthalene	ug/L	10	ND	11/01/93
2-Nitroaniline	ug/L	10	ND	11/01/93
3-Nitroaniline	ug/L	10	ND	11/01/93
4-Nitroaniline	ug/L	10	ND	11/01/93
Nitrobenzene	ug/L	10	ND	11/01/93
N-Nitrosodi-n-propylamine	ug/L	10	ND	11/01/93
N-Nitrosodiphenylamine	ug/L	10	ND	11/01/93
Phenanthrene	ug/L	10	ND	11/01/93
Pyrene	ug/L	10	ND	11/01/93

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125

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November 23, 1993
 PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0339852
Date Collected:	10/25/93
Date Received:	10/26/93
Client Sample ID:	CO-GW PT-01

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2040-2044 DATE ANALYZED</u>
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ORGANIC ANALYSIS

8270 SEMIVOLATILE ORGANIC COMPOUNDS

1,2,4-Trichlorobenzene	ug/L	10	ND	11/01/93
2-Chlorophenol	ug/L	10	ND	11/01/93
2-Methylphenol	ug/L	10	ND	11/01/93
4-Chloro-3-methylphenol	ug/L	10	ND	11/01/93
4-Methylphenol	ug/L	10	ND	11/01/93
2,4-Dichlorophenol	ug/L	10	ND	11/01/93
2,4-Dimethylphenol	ug/L	10	ND	11/01/93
2,4-Dinitrophenol	ug/L	10	ND	11/01/93
2-Methyl-4,6-Dinitrophenol	ug/L	10	ND	11/01/93
2-Nitrophenol	ug/L	10	ND	11/01/93
4-Nitrophenol	ug/L	10	ND	11/01/93
Pentachlorophenol	ug/L	10	ND	11/01/93
Phenol	ug/L	10	ND	11/01/93
2,4,5-Trichlorophenol	ug/L	10	ND	11/01/93
2,4,6-Trichlorophenol	ug/L	10	ND	11/01/93
Phenol-d6 - Surrogate	%	44		11/01/93
2-Fluorophenol - Surrogate	%	52		11/01/93
Nitrobenzene-d5 - Surrogate	%	66		11/01/93
2-Fluorobiphenyl - Surrogate	%	66		11/01/93
2,4,6-Tribromophenol - Surrogate	%	65		11/01/93
Terphenyl-d14 - Surrogate	%	62		11/01/93



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

These data have been reviewed and are approved for release.

A handwritten signature in black ink that appears to read "Michael F. Valder".

Michael F. Valder
Manager, Inorganic Chemistry

A handwritten signature in black ink that appears to read "Michael W. Palmer".

Michael W. Palmer
Manager, Organic Chemistry

Lab Certification: Florida Environmental: HRS #E84003; Florida SOWA: HRS #84125



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REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 8FOOTNOTES
for pages 1 through 7November 23, 1993
PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

ND Not detected at or above the PRL.
PRL PACE Reporting Limit
(1) Confirmed by second analysis.



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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

Arsenic EPA 206.2
Batch: 90 46278
Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Arsenic EPA 206.2	ug/L	10	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2040-2044</u>	<u>Spike</u>	<u>Spike</u>	<u>Dupl</u>	<u>Recv</u>	<u>Recv</u>	<u>RPI</u>
Arsenic EPA 206.2	ug/L	10	ND	40	102%	104%	102%	104%	2%

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Arsenic EPA 206.2	ug/L	10	40	105%

Lab Certification: Florida Environmental: HRS #EB4003; Florida SDWA: HRS #84125



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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

Chromium

Batch: 90 46216
Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Chromium	ug/L	5	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900339852</u>	<u>CO-GW</u>	<u>PT-01</u>	<u>Spike</u>	<u>Dupl</u>	<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RPI</u>
Chromium	ug/L	5	ND	2040-2044	40	105%	105%	105%	105%	0%

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Chromium	ug/L	5	40	101%



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

Lead EPA 239.2
Batch: 90 46101
Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Lead EPA 239.2	ug/L	5	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900339852</u>	<u>CO-GW</u>	<u>PT-01</u>	<u>Spike</u>	<u>Dupl</u>	<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RPI</u>
Lead EPA 239.2	ug/L	5	ND	2040-2044	40	83%	95%	13%		

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Lead EPA 239.2	ug/L	5	40	97%

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #B4125



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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 46079

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Chloromethane	ug/L	2.4	ND
Bromomethane	ug/L	4.0	ND
Dichlorodifluoromethane	ug/L	2.1	ND
Vinyl Chloride	ug/L	0.8	ND
Chloroethane	ug/L	1.4	ND
Methylene chloride	ug/L	5.0	5.3
Trichlorofluoromethane	ug/L	0.5	ND
1,1-Dichloroethylene	ug/L	0.5	ND
1,1-Dichloroethane	ug/L	0.6	ND
trans-1,2-Dichloroethylene	ug/L	0.8	ND
Chloroform	ug/L	1.0	ND
1,2-Dichloroethane	ug/L	1.0	ND
1,1,1-Trichloroethane	ug/L	0.8	ND
Carbon Tetrachloride	ug/L	0.5	ND
Bromodichloromethane	ug/L	0.6	ND
1,2-Dichloropropane	ug/L	0.5	ND
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND
1,1,2-Trichloroethylene	ug/L	0.9	ND
Dibromochloromethane	ug/L	1.0	ND
1,1,2-Trichloroethane	ug/L	1.0	ND
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND
Bromoform	ug/L	2.0	ND
1,1,2,2-Tetrachloroethane	ug/L	0.4	ND
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND
Methyl Tert-Butyl Ether	ug/L	5.0	ND
Benzene	ug/L	0.6	ND
Toluene	ug/L	1.0	ND
Chlorobenzene	ug/L	1.3	ND
Ethylbenzene	ug/L	0.9	ND
Xylenes	ug/L	0.9	ND
1,3-Dichlorobenzene	ug/L	1.1	ND
1,4-Dichlorobenzene	ug/L	1.0	ND

Lab Certification: Florida Environmental: HRS #EB4003; Florida SDWA: HRS #84125



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REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 13**QUALITY CONTROL DATA**November 23, 1993
PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 46079

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
1,2-Dichlorobenzene	ug/L	1.0	ND
Total VOA	ug/L	0.6	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900338295</u>	<u>Spike</u>	<u>Spike Recy</u>	<u>Dupl Recy</u>	<u>RPI</u>
Chloromethane	ug/L	2.4	ND	20	80%	95%	17%
Bromomethane	ug/L	4.0	ND	20	95%	110%	15%
Dichlorodifluoromethane	ug/L	2.1	ND	20	90%	100%	11%
Vinyl Chloride	ug/L	0.8	ND	20	80%	95%	17%
Chloroethane	ug/L	1.4	ND	20	85%	95%	11%
Methylene chloride	ug/L	5.0	7.5 (1)	20	83%	88%	6%
Trichlorofluoromethane	ug/L	0.5	ND	20	90%	100%	11%
1,1-Dichloroethylene	ug/L	0.5	ND	20	90%	90%	0%
1,1-Dichloroethane	ug/L	0.6	ND	20	105%	100%	5%
trans-1,2-Dichloroethylene	ug/L	0.8	ND	20	90%	95%	5%
Chloroform	ug/L	1.0	16	20	100%	95%	5%
1,2-Dichloroethane	ug/L	1.0	ND	20	100%	100%	0%
1,1,1-Trichloroethane	ug/L	0.8	ND	20	105%	105%	0%
Carbon Tetrachloride	ug/L	0.5	ND	20	100%	100%	0%
Bromodichloromethane	ug/L	0.6	3.8	20	91%	91%	0%
1,2-Dichloropropane	ug/L	0.5	ND	20	95%	95%	0%
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND	20	80%	75%	6%
1,1,2-Trichloroethylene	ug/L	0.9	ND	20	95%	100%	5%
Dibromochloromethane	ug/L	1.0	ND	20	90%	90%	0%
1,1,2-Trichloroethane	ug/L	1.0	ND	20	90%	90%	0%
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND	20	105%	100%	5%
Bromoform	ug/L	2.0	ND	20	80%	75%	6%
1,1,2,2-Tetrachloroethane	ug/L	0.4	ND	20	75%	80%	6%
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND	20	90%	90%	0%
Methyl Tert-Butyl Ether	ug/L	5.0	6.0	20	100%	95%	5%

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 46079

Samples: 90 0339852

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900338295</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Dup1 Recv</u>	<u>RPI</u>
Benzene	ug/L	0.6	0.7	20	92%	92%	0%
Toluene	ug/L	1.0	1.2	20	94%	94%	0%
Chlorobenzene	ug/L	1.3	ND	40	80%	80%	0%
Ethylbenzene	ug/L	0.9	5.0	20	65%	65%	0%
Xylenes	ug/L	0.9	4.3	60	88%	85%	3%
1,3-Dichlorobenzene	ug/L	1.1	ND	40	88%	85%	3%
1,4-Dichlorobenzene	ug/L	1.0	ND	40	90%	88%	2%
1,2-Dichlorobenzene	ug/L	1.0	ND	40	85%	80%	6%

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Chloromethane	ug/L	2.4	20	85%
Bromomethane	ug/L	4.0	20	95%
Dichlorodifluoromethane	ug/L	2.1	20	90%
Vinyl Chloride	ug/L	0.8	20	85%
Chloroethane	ug/L	1.4	20	85%
Methylene chloride	ug/L	5.0	20	135%
Trichlorofluoromethane	ug/L	0.5	20	90%
1,1-Dichloroethylene	ug/L	0.5	20	90%
1,1-Dichloroethane	ug/L	0.6	20	100%
trans-1,2-Dichloroethylene	ug/L	0.8	20	95%
Chloroform	ug/L	1.0	20	100%
1,2-Dichloroethane	ug/L	1.0	20	105%
1,1,1-Trichloroethane	ug/L	0.8	20	105%
Carbon Tetrachloride	ug/L	0.5	20	100%
Bromodichloromethane	ug/L	0.6	20	90%
1,2-Dichloropropane	ug/L	0.5	20	95%
trans-1,3-Dichloro-1-propene	ug/L	0.8	20	80%
1,1,2-Trichloroethylene	ug/L	0.9	20	95%
Dibromochloromethane	ug/L	1.0	20	80%

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



2 4 0073

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 15**QUALITY CONTROL DATA**November 23, 1993
PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 46079

Samples: 90 0339852

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recd</u>
1,1,2-Trichloroethane	ug/L	1.0	20	90%
cis-1,3-Dichloro-1-propene	ug/L	0.7	20	105%
Bromoform	ug/L	2.0	20	80%
1,1,2,2-Tetrachloroethane	ug/L	0.4	20	85%
1,1,2,2-Tetrachloroethylene	ug/L	0.9	20	85%
Methyl Tert-Butyl Ether	ug/L	5.0	20	95%
Benzene	ug/L	0.6	20	90%
Toluene	ug/L	1.0	20	95%
Chlorobenzene	ug/L	1.3	40	78%
Ethylbenzene	ug/L	0.9	20	90%
Xylenes	ug/L	0.9	60	88%
1,3-Dichlorobenzene	ug/L	1.1	40	85%
1,4-Dichlorobenzene	ug/L	1.0	40	95%
1,2-Dichlorobenzene	ug/L	1.0	40	93%

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #B4125



2 4 0074

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

8080- ORGANOCHLORINE PESTICIDES AND PCB'S

Batch: 90 46235

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
a-BHC	ug/L	0.05	ND
b-BHC	ug/L	0.05	ND
g-BHC	ug/L	0.05	ND
d-BHC	ug/L	0.05	ND
Heptachlor	ug/L	0.05	ND
Aldrin	ug/L	0.05	ND
Heptachlor epoxide	ug/L	0.05	ND
Endosulfan I	ug/L	0.05	ND
Dieldrin	ug/L	0.1	ND
Endrin	ug/L	0.1	ND
4,4-DDD	ug/L	0.1	ND
Endosulfan II	ug/L	0.1	ND
4,4-DDT	ug/L	0.1	ND
4,4-DDE	ug/L	0.1	ND
Endrin aldehyde	ug/L	0.1	ND
Endosulfan sulfate	ug/L	0.1	ND
Chlordane	ug/L	1.0	ND
Methoxychlor	ug/L	0.5	ND
Toxaphene	ug/L	3.0	ND
PCB-1016	ug/L	0.5	ND
PCB-1221	ug/L	0.5	ND
PCB-1232	ug/L	0.5	ND
PCB-1242	ug/L	0.1	ND
PCB-1248	ug/L	0.1	ND
PCB-1254	ug/L	0.5	ND
PCB-1260	ug/L	0.5	ND
2,4,5,6-tetrachloro m-xylene - surrogat %		0.1	76

Lab Certification: Florida Environmental: HRS #E84003; Florida SOWA: HRS #84125



2 4 0075

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 17**QUALITY CONTROL DATA**November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

8080- ORGANOCHLORINE PESTICIDES AND PCB'S

Batch: 90 46235

Samples: 90 0339852

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	900339852		<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RP</u>			
			CO-GW							
			PT-01	<u>Spike</u>						
g-BHC	ug/L	0.05	1.2	1.25	80%	88%	10'			
Heptachlor	ug/L	0.05	ND	1.25	78%	80%	3'			
Aldrin	ug/L	0.05	ND	1.25	76%	78%	3'			
Dieldrin	ug/L	0.1	ND	5.0	84%	84%	0'			
Endrin	ug/L	0.1	ND	5.0	104%	104%	0'			
4,4-DDT	ug/L	0.1	ND	5.0	84%	84%	0'			
2,4,5,6-Tetrachloro m-xylene - surrogat	ug/L	0.1	78							
2,4,5,6-Tetrachloro m-xylene - surrogat	%	0.1			&	&				

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>		<u>Recv</u>
			<u>Value</u>	<u>Recv</u>	
a-BHC	ug/L	0.05	2.0	90%	
b-BHC	ug/L	0.05	2.0	90%	
g-BHC	ug/L	0.05	2.0	90%	
d-BHC	ug/L	0.05	2.0	95%	
Heptachlor	ug/L	0.05	2.0	90%	
Aldrin	ug/L	0.05	2.0	85%	
Heptachlor epoxide	ug/L	0.05	2.0	90%	
Endosulfan I	ug/L	0.05	2.0	95%	
Dieldrin	ug/L	0.1	2.0	95%	
Endrin	ug/L	0.1	2.0	105%	
4,4-DDD	ug/L	0.1	2.0	100%	
Endosulfan II	ug/L	0.1	2.0	95%	
4,4-DDT	ug/L	0.1	2.0	100%	
4,4-DDE	ug/L	0.1	2.0	95%	
Endrin aldehyde	ug/L	0.1	2.0	100%	
Endosulfan sulfate	ug/L	0.1	2.0	95%	
2,4,5,6-Tetrachloro m-xylene - surrogat	%	0.1	100	&	

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



2 4 0076

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157C

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Batch: 90 46191

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Acenaphthene	ug/L	10	ND
Acenaphthylene	ug/L	10	ND
Anthracene	ug/L	10	ND
Benzoic Acid	ug/L	10	ND
Benzo(a)anthracene	ug/L	10	ND
Benzo(a)pyrene	ug/L	10	ND
Benzo(b)fluoranthene	ug/L	10	ND
Benzo(k)fluoranthene	ug/L	10	ND
Benzo(g,h,i)perylene	ug/L	10	ND
Benzyl Alcohol	ug/L	10	ND
4-Bromophenyl phenyl ether	ug/L	10	ND
Butyl benzyl phthalate	ug/L	10	ND
Bis(2-ethyl hexyl)phthalate	ug/L	10	ND
Bis(2-chloroethoxy)methane	ug/L	10	ND
Bis(2-chloroethyl)ether	ug/L	10	ND
Bis(2-chloroisopropyl)ether	ug/L	10	ND
2-Chloronaphthalene	ug/L	10	ND
4-Chloroaniline	ug/L	10	ND
4-Chlorophenyl phenyl ether	ug/L	10	ND
Chrysene	ug/L	10	ND
Dibenzo(a,h)anthracene	ug/L	10	ND
1,2-Dichlorobenzene	ug/L	10	ND
1,3-Dichlorobenzene	ug/L	10	ND
1,4-Dichlorobenzene	ug/L	10	ND
3,3-Dichlorobenzidine	ug/L	10	ND
Dibenzofuran	ug/L	10	ND
Diethyl phthalate	ug/L	10	ND
Dimethyl phthalate	ug/L	10	ND
Di-n-butyl phthalate	ug/L	10	ND
2,4-Dinitrotoluene	ug/L	10	ND
2,6-Dinitrotoluene	ug/L	10	ND
Di-n-octyl phthalate	ug/L	10	ND

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



2 4

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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993

PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Batch: 90 46191

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Fluoranthene	ug/L	10	ND
Fluorene	ug/L	10	ND
Hexachlorocyclopentadiene	ug/L	10	ND
Hexachlorobenzene	ug/L	10	ND
Hexachlorobutadiene	ug/L	10	ND
Hexachloroethane	ug/L	10	ND
Indeno(1,2,3-c,d)pyrene	ug/L	10	ND
Isophorone	ug/L	10	ND
2-Methylnaphthalene	ug/L	10	ND
Naphthalene	ug/L	10	ND
2-Nitroaniline	ug/L	10	ND
3-Nitroaniline	ug/L	10	ND
4-Nitroaniline	ug/L	10	ND
Nitrobenzene	ug/L	10	ND
N-Nitrosodi-n-propylamine	ug/L	10	ND
N-Nitrosodiphenylamine	ug/L	10	ND
Phenanthrene	ug/L	10	ND
Pyrene	ug/L	10	ND
1,2,4-Trichlorobenzene	ug/L	10	ND
2-Chlorophenol	ug/L	10	ND
2-Methylphenol	ug/L	10	ND
4-Chloro-3-methylphenol	ug/L	10	ND
4-Methylphenol	ug/L	10	ND
2,4-Dichlorophenol	ug/L	10	ND
2,4-Dimethylphenol	ug/L	10	ND
2,4-Dinitrophenol	ug/L	10	ND
2-Methyl-4,6-Dinitrophenol	ug/L	10	ND
2-Nitrophenol	ug/L	10	ND
4-Nitrophenol	ug/L	10	ND
Pentachlorophenol	ug/L	10	ND
Phenol	ug/L	10	ND
2,4,5-Trichlorophenol	ug/L	10	ND

Lab Certification: Florida Environmental: HRS #EB4003; Florida SDWA: HRS #B4125



2 4 0078

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 20**QUALITY CONTROL DATA**November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Batch: 90 46191

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
2,4,6-Trichlorophenol	ug/L	10	ND
Phenol-d6 - Surrogate	%		37
2-Fluorophenol - Surrogate	%		46
Nitrobenzene-d5 - Surrogate	%		54
2-Fluorobiphenyl - Surrogate	%		60
2,4,6-Tribromophenol - Surrogate	%		38
Terphenyl-d14 - Surrogate	%		54

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	900339852		<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RP</u>
			CO-GW	PT-01			
			<u>2040-2044</u>	<u>Spike Recv</u>			
Acenaphthene	ug/L	10	ND	50	56%	52%	7
1,4-Dichlorobenzene	ug/L	10	ND	50	54%	52%	4
2,4-Dinitrotoluene	ug/L	10	ND	50	40%	38%	5
N-Nitrosodi-n-propylamine	ug/L	10	ND	50	56%	56%	0
Pyrene	ug/L	10	ND	50	66%	64%	3
1,2,4-Trichlorobenzene	ug/L	10	ND	50	52%	48%	8
2-Chlorophenol	ug/L	10	ND	75	53%	44%	19
4-Chloro-3-methylphenol	ug/L	10	ND	75	52%	49%	6
4-Nitrophenol	ug/L	10	ND	75	31%	23%	30
Pentachlorophenol	ug/L	10	ND	75	76%	56%	30
Phenol	ug/L	10	ND	75	55%	48%	14

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Acenaphthene	ug/L	10	50	58%
1,4-Dichlorobenzene	ug/L	10	50	52%
2,4-Dinitrotoluene	ug/L	10	50	34%
N-Nitrosodi-n-propylamine	ug/L	10	50	54%
Pyrene	ug/L	10	50	60%

Lab Certification: Florida Environmental: HRS #E84003; Florida SOWA: HRS #84125



2 4 0079

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Batch: 90 46191

Samples: 90 0339852

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PBL</u>	<u>Reference</u>	
			<u>Value</u>	<u>Recv</u>
1,2,4-Trichlorobenzene	ug/L	10	50	50%
2-Chlorophenol	ug/L	10	50	70%
4-Chloro-3-methylphenol	ug/L	10	50	64%
4-Nitrophenol	ug/L	10	50	4%
Pentachlorophenol	ug/L	10	50	48%
Phenol	ug/L	10	50	56%

Lab Certification: Florida Environmental: HRS #EB4003; Florida SDWA: HRS #84125



2 4 0080

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993

PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Batch: 90 46221

Samples: 90 0339852

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
INDIVIDUAL PARAMETERS			
Ethion	ug/L	5.0	ND
Malathion	ug/L	5.0	ND
Parathion Ethyl	ug/L	5.0	ND
ORGANOPHOSPHORUS PESTICIDES (EPA 8140)			
Dichlorvos	ug/L	5.0	ND
Mevinphos	ug/L	5.0	ND
Demeton-S	ug/L	5.0	ND
Ethoprop	ug/L	5.0	ND
Naled	ug/L	5.0	ND
Phorate	ug/L	5.0	ND
Demeton-O	ug/L	5.0	ND
Diazinon	ug/L	5.0	ND
Disulfoton	ug/L	5.0	ND
Parathion Methyl	ug/L	5.0	ND
Ronnel	ug/L	5.0	ND
Chlorpyrifos	ug/L	5.0	ND
Fenthion	ug/L	5.0	ND
Fensulfothion	ug/L	5.0	ND
Trichloronate	ug/L	5.0	ND
Stirophos	ug/L	5.0	ND
Tokuthion	ug/L	5.0	ND
Merphos	ug/L	5.0	ND
Bolstar	ug/L	5.0	ND
Azinphos Methyl (Guthion)	ug/L	5.0	ND
Coumaphos	ug/L	5.0	ND
1,3-Dimethyl-2-nitrobenzene	%	0.01	53

Lab Certification: Florida Environmental: HRS #E84003; Florida SDWA: HRS #84125



2 4 0081

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Batch: 90 46221

Samples: 90 0339852

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	900339852		<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RPI</u>
			<u>CO-GW</u>	<u>PT-01</u>			
INDIVIDUAL PARAMETERS							
Ethion	ug/L	5.0	ND	25	88%	92%	4
Malathion	ug/L	5.0	ND	25	92%	92%	0
Parathion Ethyl	ug/L	5.0	ND	25	88%	88%	0
ORGANOPHOSPHORUS PESTICIDES (EPA 8140)							
Dichlorvos	ug/L	5.0	ND	25	64%	88%	32
Mevinphos	ug/L	5.0	ND	25	68%	84%	21
Demeton-S	ug/L	5.0	ND	25	88%	92%	4
Ethoprop	ug/L	5.0	ND	25	76%	88%	15
Naled	ug/L	5.0	ND	25	68%	68%	0
Phorate	ug/L	5.0	ND	25	60%	72%	18
Demeton-O	ug/L	5.0	ND	25	64%	80%	22
Diazinon	ug/L	5.0	ND	25	80%	84%	5
Disulfoton	ug/L	5.0	ND	25	76%	84%	10
Parathion Methyl	ug/L	5.0	ND	25	88%	92%	4
Ronnel	ug/L	5.0	ND	25	84%	84%	0
Chlorpyrifos	ug/L	5.0	ND	25	88%	88%	0
Fenthion	ug/L	5.0	ND	25	88%	92%	4
Fensulfothion	ug/L	5.0	ND	25	92%	100%	8
Trichloronate	ug/L	5.0	ND	25	88%	92%	4
Stirophos	ug/L	5.0	ND	25	112%	112%	0
Tokuthion	ug/L	5.0	ND	25	88%	92%	4
Morphos	ug/L	5.0	ND	25	84%	84%	0
Bolstar	ug/L	5.0	ND	25	88%	92%	4
Azinphos Methyl (Guthion)	ug/L	5.0	ND	25	100%	104%	4
Coumaphos	ug/L	5.0	ND	25	100%	104%	4
1,3-Dimethyl-2-nitrobenzene	%	0.01	56		&	&	

Lab Certification: Florida Environmental: HRS #E84003; Florida SOWA: HRS #84125



2 4 0082

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

November 23, 1993
PACE Project Number: 231021573

Client Reference: CHEVRON ORLANDO PHASE II

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Batch: 90 46221

Samples: 90 0339852

LABORATORY CONTROL SAMPLE:

Parameter	Units	PRL	Reference Value	Recv
INDIVIDUAL PARAMETERS				
Ethion	ug/L	5.0	10	90%
Malathion	ug/L	5.0	10	88%
Parathion Ethyl	ug/L	5.0	10	82%
ORGANOPHOSPHORUS PESTICIDES (EPA 8140)				
Dichlorvos	ug/L	5.0	10	60%
Mevinphos	ug/L	5.0	10	61%
Demeton-S	ug/L	5.0	10	78%
Ethoprop	ug/L	5.0	10	70%
Naled	ug/L	5.0	10	44%
Phorate	ug/L	5.0	10	61%
Demeton-O	ug/L	5.0	10	57%
Diazinon	ug/L	5.0	10	74%
Disulfoton	ug/L	5.0	10	70%
Parathion Methyl	ug/L	5.0	10	82%
Ronnel	ug/L	5.0	10	74%
Chlorpyrifos	ug/L	5.0	10	81%
Fenthion	ug/L	5.0	10	86%
Fensulfothion	ug/L	5.0	10	96%
Trichloronate	ug/L	5.0	10	82%
Stirophos	ug/L	5.0	10	110%
Tokuthion	ug/L	5.0	10	88%
Merphos	ug/L	5.0	10	81%
Bolstar	ug/L	5.0	10	92%
Azinphos Methyl (Guthion)	ug/L	5.0	10	98%
Coumaphos	ug/L	5.0	10	100%
1,3-Dimethyl-2-nitrobenzene	%	0.01	100	&

Lab Certification: Florida Environmental: MRS #E84003; Florida SOWA: MRS #84125

Ms. Susan Tobin
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FOOTNOTES
for pages 9 through 24

November 23, 1993
PACE Project Number: 23102157

Client Reference: CHEVRON ORLANDO PHASE II

- & Recovery not calculated because solution units don't match
ND Not detected at or above the PRL.
PRL PACE Reporting Limit
RPD Relative Percent Difference
(1) Analyte is found in the associated blank as well as in the sample.

2 4 0084

**ANALYSIS DATED APRIL 6, 1994
PURGE WATER TANK NO. 1
CHARACTERIZATION FOR DISCHARGE**



2 4 0085

REPORT OF LABORATORY ANALYSIS

April 06, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240318.582
Client Reference: CHEVRON ORLANDO PHASE II

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received March 30, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Chris Jock
Project Manager

Enclosures

FLORIDA ENVIRONMENTAL
APR 6 1994
FLORIDA ENVIRONMENTAL



2 4 0086

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

April 06, 1994
PACE Project Number: 24031858

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number: 90 0413661
Date Collected: 03/29/94
Date Received: 03/30/94
CO-PW

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Tank 1</u>	<u>DATE ANALYZED</u>
------------------	--------------	------------	---------------	----------------------

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Arsenic EPA 206.2	ug/L	10	ND	04/05/94
Chromium	ug/L	5	ND	04/06/94
Lead EPA 239.2	ug/L	5	ND	04/06/94

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES AND PCB'S**

Date Extracted-Pesticides/PCBS 03/31/94

a-BHC	ug/L	0.05	ND	04/05/94
b-BHC	ug/L	0.05	ND	04/05/94
g-BHC	ug/L	0.05	ND	04/05/94
d-BHC	ug/L	0.05	ND	04/05/94
Heptachlor	ug/L	0.05	ND	04/05/94
Aldrin	ug/L	0.05	ND	04/05/94
Heptachlor epoxide	ug/L	0.05	ND	04/05/94
Endosulfan I	ug/L	0.05	ND	04/05/94
Dieldrin	ug/L	0.1	ND	04/05/94
Endrin	ug/L	0.1	ND	04/05/94
4,4-DDD	ug/L	0.1	ND	04/05/94
Endosulfan II	ug/L	0.1	ND	04/05/94
4,4-DDT	ug/L	0.1	ND	04/05/94
4,4-DDE	ug/L	0.1	ND	04/05/94
Endrin aldehyde	ug/L	0.1	ND	04/05/94
Endosulfan sulfate	ug/L	0.1	ND	04/05/94
Chlordane	ug/L	1.0	ND	04/05/94
Methoxychlor	ug/L	0.5	ND	04/05/94
Toxaphene	ug/L	3.0	ND	04/05/94
PCB-1016	ug/L	0.5	ND	04/05/94
PCB-1221	ug/L	0.5	ND	04/05/94
PCB-1232	ug/L	0.5	ND	04/05/94



2 4 0087

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 2April 06, 1994
PACE Project Number: 24031858

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0413661		
Date Collected:	03/29/94		
Date Received:	03/30/94		
Client Sample ID:	CO-PW		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Tank 1</u>

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES AND PCB'S**

PCB-1242	ug/L	0.1	ND	04/05/94
PCB-1248	ug/L	0.1	ND	04/05/94
PCB-1254	ug/L	0.5	ND	04/05/94
PCB-1260	ug/L	0.5	ND	04/05/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	93	04/05/94

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Date Extracted				04/01/94
Dichlorvos	ug/L	5.0	ND	04/06/94
Mevinphos	ug/L	5.0	ND	04/06/94
Demeton-S	ug/L	5.0	ND	04/06/94
Ethoprop	ug/L	5.0	ND	04/06/94
Naled	ug/L	5.0	ND	04/06/94
Phorate	ug/L	5.0	ND	04/06/94
Demeton-O	ug/L	5.0	ND	04/06/94
Diazinon	ug/L	5.0	ND	04/06/94
Disulfoton	ug/L	5.0	ND	04/06/94
Parathion Methyl	ug/L	5.0	ND	04/06/94
Ronnel	ug/L	5.0	ND	04/06/94
Chlorpyrifos	ug/L	5.0	ND	04/06/94
Fenthion	ug/L	5.0	ND	04/06/94
Fensulfothion	ug/L	5.0	ND	04/06/94
Trichloronate	ug/L	5.0	ND	04/06/94
Stirophos	ug/L	5.0	ND	04/06/94
Tokuthion	ug/L	5.0	ND	04/06/94
Merphos	ug/L	5.0	ND	04/06/94
Bolstar	ug/L	5.0	ND	04/06/94
Azinphos Methyl (Guthion)	ug/L	5.0	ND	04/06/94
Coumaphos	ug/L	5.0	ND	04/06/94
1,3-Dimethyl-2-nitrobenzene	%	0.01	84	04/06/94

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Date Extracted				03/31/94
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2 4 0088

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 3April 06, 1994
PACE Project Number: 24031858

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0413661		
Date Collected:	03/29/94		
Date Received:	03/30/94		
Client Sample ID:	CO-PW		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Tank 1</u>

ORGANIC ANALYSIS**8270 SEMIVOLATILE ORGANIC COMPOUNDS**

Acenaphthene	ug/L	10	ND	04/04/94
Acenaphthylene	ug/L	10	ND	04/04/94
Anthracene	ug/L	10	ND	04/04/94
Benzoic Acid	ug/L	10	ND	04/04/94
Benzo(a)anthracene	ug/L	10	ND	04/04/94
Benzo(a)pyrene	ug/L	10	ND	04/04/94
Benzo(b)fluoranthene	ug/L	10	ND	04/04/94
Benzo(k)fluoranthene	ug/L	10	ND	04/04/94
Benzo(g,h,i)perylene	ug/L	10	ND	04/04/94
Benzyl Alcohol	ug/L	10	ND	04/04/94
4-Bromophenyl phenyl ether	ug/L	10	ND	04/04/94
Butyl benzyl phthalate	ug/L	10	ND	04/04/94
Bis(2-ethyl hexyl)phthalate	ug/L	10	ND	04/04/94
Bis(2-chloroethoxy)methane	ug/L	10	ND	04/04/94
Bis(2-chloroethyl)ether	ug/L	10	ND	04/04/94
Bis(2-chloroisopropyl)ether	ug/L	10	ND	04/04/94
2-Chloronaphthalene	ug/L	10	ND	04/04/94
4-Chloroaniline	ug/L	10	ND	04/04/94
4-Chlorophenyl phenyl ether	ug/L	10	ND	04/04/94
Chrysene	ug/L	10	ND	04/04/94
Dibenzo(a,h)anthracene	ug/L	10	ND	04/04/94
1,2-Dichlorobenzene	ug/L	10	ND	04/04/94
1,3-Dichlorobenzene	ug/L	10	ND	04/04/94
1,4-Dichlorobenzene	ug/L	10	ND	04/04/94
3,3-Dichlorobenzidine	ug/L	10	ND	04/04/94
Dibenzofuran	ug/L	10	ND	04/04/94
Diethyl phthalate	ug/L	10	ND	04/04/94
Dimethyl phthalate	ug/L	10	ND	04/04/94
Di-n-butyl phthalate	ug/L	10	ND	04/04/94
2,4-Dinitrotoluene	ug/L	10	ND	04/04/94
2,6-Dinitrotoluene	ug/L	10	ND	04/04/94



2 4

0089

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 4April 06, 1994
PACE Project Number: 2403185E

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:		90 0413661		
Date Collected:		03/29/94		
Date Received:		03/30/94		
Client Sample ID:		CO-PW		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Tank 1</u>	<u>DATE ANALYZED</u>

ORGANIC ANALYSIS

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Di-n-octyl phthalate	ug/L	10	ND	04/04/94
Fluoranthene	ug/L	10	ND	04/04/94
Fluorene	ug/L	10	ND	04/04/94
Hexachlorocyclopentadiene	ug/L	10	ND	04/04/94
Hexachlorobenzene	ug/L	10	ND	04/04/94
Hexachlorobutadiene	ug/L	10	ND	04/04/94
Hexachloroethane	ug/L	10	ND	04/04/94
Indeno(1,2,3-c,d)pyrene	ug/L	10	ND	04/04/94
Isophorone	ug/L	10	ND	04/04/94
2-Methylnaphthalene	ug/L	10	ND	04/04/94
Naphthalene	ug/L	10	ND	04/04/94
2-Nitroaniline	ug/L	10	ND	04/04/94
3-Nitroaniline	ug/L	10	ND	04/04/94
4-Nitroaniline	ug/L	10	ND	04/04/94
Nitrobenzene	ug/L	10	ND	04/04/94
N-Nitrosodi-n-propylamine	ug/L	10	ND	04/04/94
N-Nitrosodiphenylamine	ug/L	10	ND	04/04/94
Phenanthrene	ug/L	10	ND	04/04/94
Pyrene	ug/L	10	ND	04/04/94
1,2,4-Trichlorobenzene	ug/L	10	ND	04/04/94
2-Chlorophenol	ug/L	10	ND	04/04/94
2-Methylphenol	ug/L	10	ND	04/04/94
4-Chloro-3-methylphenol	ug/L	10	ND	04/04/94
4-Methylphenol	ug/L	10	ND	04/04/94
2,4-Dichlorophenol	ug/L	10	ND	04/04/94
2,4-Dimethylphenol	ug/L	10	ND	04/04/94
2,4-Dinitrophenol	ug/L	10	ND	04/04/94
2-Methyl-4,6-Dinitrophenol	ug/L	10	ND	04/04/94
2-Nitrophenol	ug/L	10	ND	04/04/94
4-Nitrophenol	ug/L	10	ND	04/04/94
Pentachlorophenol	ug/L	10	ND	04/04/94



2 4 0090

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 5April 06, 1994
PACE Project Number: 24031858

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:		90 0413661		
Date Collected:		03/29/94		
Date Received:		03/30/94		
Client Sample ID:		CO-PW		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Tank 1</u>	<u>DATE ANALYZED</u>

ORGANIC ANALYSIS

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Phenol	ug/L	10	ND	04/04/94
2,4,5-Trichlorophenol	ug/L	10	ND	04/04/94
2,4,6-Trichlorophenol	ug/L	10	ND	04/04/94
Phenol-d6 - Surrogate	%	35	ND	04/04/94
2-Fluorophenol - Surrogate	%	50	ND	04/04/94
Nitrobenzene-d5 - Surrogate	%	60	ND	04/04/94
2-Fluorobiphenyl - Surrogate	%	68	ND	04/04/94
2,4,6-Tribromophenol - Surrogate	%	75	ND	04/04/94
Terphenyl-d14 - Surrogate	%	74	ND	04/04/94

601/602 - VOLATILE HALOCARBONS/AROMATICS

Ch'oromethane	ug/L	2.4	ND	04/05/94
Bromomethane	ug/L	4.0	ND	04/05/94
Dichlorodifluoromethane	ug/L	2.1	ND	04/05/94
Vinyl Chloride	ug/L	0.8	ND	04/05/94
Chloroethane	ug/L	1.4	ND	04/05/94
Methylene chloride	ug/L	5.0	ND	04/05/94
Trichlorofluoromethane	ug/L	0.5	ND	04/05/94
1,1-Dichloroethylene	ug/L	0.5	ND	04/05/94
1,1-Dichloroethane	ug/L	0.6	ND	04/05/94
trans-1,2-Dichloroethylene	ug/L	0.8	ND	04/05/94
Chloroform	ug/L	1.0	ND	04/05/94
1,2-Dichloroethane	ug/L	1.0	ND	04/05/94
1,1,1-Trichloroethane	ug/L	0.8	ND	04/05/94
Carbon Tetrachloride	ug/L	0.5	ND	04/05/94
Bromodichloromethane	ug/L	0.6	ND	04/05/94
1,2-Dichloropropane	ug/L	0.5	ND	04/05/94
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND	04/05/94
1,1,2-Trichloroethylene	ug/L	0.9	ND	04/05/94
Dibromochloromethane	ug/L	1.0	ND	04/05/94
1,1,2-Trichloroethane	ug/L	1.0	ND	04/05/94
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND	04/05/94



2 4 0091

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 6April 06, 1994
PACE Project Number: 2403185E

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0413661		
Date Collected:	03/29/94		
Date Received:	03/30/94		
Client Sample ID:	CO-PW		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Tank 1</u>

ORGANIC ANALYSIS**601/602 - VOLATILE HALOCARBONS/AROMATICS**

Bromoform	ug/L	2.0	ND	04/05/94
1,1,2,2-Tetrachloroethane	ug/L	0.4	ND	04/05/94
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND	04/05/94
Methyl Tert-Butyl Ether	ug/L	5.0	ND	04/05/94
Benzene	ug/L	0.6	ND	04/05/94
Toluene	ug/L	1.0	ND	04/05/94
Chlorobenzene	ug/L	1.3	ND	04/05/94
Ethylbenzene	ug/L	0.9	ND	04/05/94
Xylenes	ug/L	0.9	ND	04/05/94
1,3-Dichlorobenzene	ug/L	1.1	ND	04/05/94
1,4-Dichlorobenzene	ug/L	1.0	ND	04/05/94
1,2-Dichlorobenzene	ug/L	1.0	ND	04/05/94
Total VOA	ug/L	0.6	ND	04/05/94

These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic ChemistryMichael W. Palmer
Manager, Organic Chemistry



2 4 0092

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 7

FOOTNOTES
for pages 1 through 6

April 06, 1994
PACE Project Number: 24031858

Client Reference: CHEVRON ORLANDO PHASE II

ND Not detected at or above the PRL.
PRL PACE Reporting Limit



167851

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client **TASK Environmental**
Address 710 S. Howard Ave
Tampa FL
Phone 813 254-8939

Sampled By (PRINT):

Susan Tobin

Sampler Signature

Date Sampled

Date Sampled

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PAGE NO.
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Additional Comments

ITEM NUMBER	RELINQUISHED BY AFFILIATION	ACCEPTED BY AFFILIATION	DATE	TIME
	PhKense TASH	JamT.Sims /PACI	3/3/94	1:26

2 4 0094

**ANALYSIS DATED APRIL 21, 1994
PURGE WATER TANK NO. 2
CHARACTERIZATION FOR DISCHARGE**



2 4 0095

REPORT OF LABORATORY ANALYSIS

April 21, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240413.575
Client Reference: CHEVRON ORLANDO PHASE II

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received April 13, 1994.

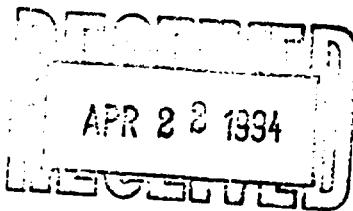
Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Chris Jock
Project Manager

Enclosures





2 4 0096

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

April 21, 1994
PACE Project Number: 24041357

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number: 90 0421389
Date Collected: 04/13/94
Time Collected: 13:20
Date Received: 04/13/94
CO-PW-TANK

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>DATE ANALYZED</u>
		02	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Arsenic EPA 206.2	ug/L	10	ND	04/19/94
Chromium	ug/L	5	6	04/19/94
Lead EPA 239.2	ug/L	5	8	04/19/94

ORGANIC ANALYSIS**601/602 - VOLATILE HALOCARBONS/AROMATICS**

Chloromethane	ug/L	2.4	ND	04/17/94
Bromomethane	ug/L	4.0	ND	04/17/94
Dichlorodifluoromethane	ug/L	2.1	ND	04/17/94
Vinyl Chloride	ug/L	0.8	ND	04/17/94
Chloroethane	ug/L	1.4	ND	04/17/94
Methylene chloride	ug/L	5.0	ND	04/17/94
Trichlorofluoromethane	ug/L	0.5	ND	04/17/94
1,1-Dichloroethylene	ug/L	0.5	ND	04/17/94
1,1-Dichloroethane	ug/L	0.6	ND	04/17/94
trans-1,2-Dichloroethylene	ug/L	0.8	ND	04/17/94
Chloroform	ug/L	1.0	ND	04/17/94
1,2-Dichloroethane	ug/L	1.0	ND	04/17/94
1,1,1-Trichloroethane	ug/L	0.8	ND	04/17/94
Carbon Tetrachloride	ug/L	0.5	ND	04/17/94
Bromodichloromethane	ug/L	0.6	ND	04/17/94
1,2-Dichloropropane	ug/L	0.5	ND	04/17/94
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND	04/17/94
1,1,2-Trichloroethylene	ug/L	0.9	ND	04/17/94
Dibromochloromethane	ug/L	1.0	ND	04/17/94
1,1,2-Trichloroethane	ug/L	1.0	ND	04/17/94
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND	04/17/94
Bromoform	ug/L	2.0	ND	04/17/94



240097

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 2April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0421389		
Date Collected:	04/13/94		
Time Collected:	13:20		
Date Received:	04/13/94		
Client Sample ID:	CO-PW-TANK		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		02	

ORGANIC ANALYSIS**601/602 - VOLATILE HALOCARBONS/AROMATICS**

1,1,2,2-Tetrachloroethane	ug/L	0.4	ND	04/17/94
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND	04/17/94
Methyl Tert-Butyl Ether	ug/L	5.0	ND	04/17/94
Benzene	ug/L	0.6	ND	04/17/94
Toluene	ug/L	1.0	ND	04/17/94
Chlorobenzene	ug/L	1.3	ND	04/17/94
Ethylbenzene	ug/L	0.9	ND	04/17/94
Xylenes	ug/L	0.9	ND	04/17/94
1,3-Dichlorobenzene	ug/L	1.1	ND	04/17/94
1,4-Dichlorobenzene	ug/L	1.0	ND	04/17/94
1,2-Dichlorobenzene	ug/L	1.0	ND	04/17/94
Total VOA	ug/L	0.6	ND	04/17/94

8080 ORGANOCHLORINE PESTICIDES AND PCB'S

Date Extracted-Pesticides/PCBS			04/14/94	
a-BHC	ug/L	0.05	ND	04/20/94
b-BHC	ug/L	0.05	ND	04/20/94
g-BHC	ug/L	0.05	ND	04/20/94
d-BHC	ug/L	0.05	ND	04/20/94
Heptachlor	ug/L	0.05	ND	04/20/94
Aldrin	ug/L	0.05	ND	04/20/94
Heptachlor epoxide	ug/L	0.05	ND	04/20/94
Endosulfan I	ug/L	0.05	ND	04/20/94
Dieldrin	ug/L	0.1	ND	04/20/94
Endrin	ug/L	0.1	ND	04/20/94
4,4-DDD	ug/L	0.1	ND	04/20/94
Endosulfan II	ug/L	0.1	ND	04/20/94
4,4-DDT	ug/L	0.1	ND	04/20/94
4,4-DDE	ug/L	0.1	ND	04/20/94
Endrin aldehyde	ug/L	0.1	ND	04/20/94
Endosulfan sulfate	ug/L	0.1	ND	04/20/94
Chlordane	ug/L	1.0	ND	04/20/94



2 4 0098

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 3April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0421389		
Date Collected:	04/13/94		
Time Collected:	13:20		
Date Received:	04/13/94		
Client Sample ID:	CO-PW-TANK		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		02	

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES AND PCB'S**

Methoxychlor	ug/L	0.5	ND	04/20/94
Toxaphene	ug/L	3.0	ND	04/20/94
PCB-1016	ug/L	0.5	ND	04/20/94
PCB-1221	ug/L	0.5	ND	04/20/94
PCB-1232	ug/L	0.5	ND	04/20/94
PCB-1242	ug/L	0.1	ND	04/20/94
PCB-1248	ug/L	0.1	ND	04/20/94
PCB-1254	ug/L	0.5	ND	04/20/94
PCB-1260	ug/L	0.5	ND	04/20/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	94	04/20/94

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Date Extracted				04/18/94
Dichlorvos	ug/L	5.0	ND	04/21/94
Mevinphos	ug/L	5.0	ND	04/21/94
Demeton-S	ug/L	5.0	ND	04/21/94
Ethoprop	ug/L	5.0	ND	04/21/94
Naled	ug/L	5.0	ND	04/21/94
Phorate	ug/L	5.0	ND	04/21/94
Demeton-O	ug/L	5.0	ND	04/21/94
Diazinon	ug/L	5.0	ND	04/21/94
Disulfoton	ug/L	5.0	ND	04/21/94
Parathion Methyl	ug/L	5.0	ND	04/21/94
Ronnel	ug/L	5.0	ND	04/21/94
Chlorpyrifos	ug/L	5.0	ND	04/21/94
Fenthion	ug/L	5.0	ND	04/21/94
Fensulfothion	ug/L	5.0	ND	04/21/94
Trichloronate	ug/L	5.0	ND	04/21/94
Stirophos	ug/L	5.0	ND	04/21/94
Tokuthion	ug/L	5.0	ND	04/21/94
Merphos	ug/L	5.0	ND	04/21/94



2 4 0099

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 4April 21, 1994
PACE Project Number: 2404135

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:	90 0421389		
Date Collected:	04/13/94		
Time Collected:	13:20		
Date Received:	04/13/94		
Client Sample ID:	CO-PW-TANK		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
02			

ORGANIC ANALYSIS**ORGANOPHOSPHORUS PESTICIDES (EPA 8140)**

Bolstar	ug/L	5.0	ND	04/21/94
Azinphos Methyl (Guthion)	ug/L	5.0	ND	04/21/94
Coumaphos	ug/L	5.0	ND	04/21/94
1,3-Dimethyl-2-nitrobenzene	%	0.01	48	04/21/94

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Date Extracted			04/15/94	
Acenaphthene	ug/L	10	ND	04/18/94
Acenaphthylene	ug/L	10	ND	04/18/94
Anthracene	ug/L	10	ND	04/18/94
Benzoic Acid	ug/L	10	ND	04/18/94
Benzo(a)anthracene	ug/L	10	ND	04/18/94
Benzo(a)pyrene	ug/L	10	ND	04/18/94
Benzo(b)fluoranthene	ug/L	10	ND	04/18/94
Benzo(k)fluoranthene	ug/L	10	ND	04/18/94
Benzo(g,h,i)perylene	ug/L	10	ND	04/18/94
Benzyl Alcohol	ug/L	10	ND	04/18/94
4-Bromophenyl phenyl ether	ug/L	10	ND	04/18/94
Butyl benzyl phthalate	ug/L	10	ND	04/18/94
Bis(2-ethyl hexyl)phthalate	ug/L	10	ND	04/18/94
Bis(2-chloroethoxy)methane	ug/L	10	ND	04/18/94
Bis(2-chloroethyl)ether	ug/L	10	ND	04/18/94
Bis(2-chloroisopropyl)ether	ug/L	10	ND	04/18/94
2-Chloronaphthalene	ug/L	10	ND	04/18/94
4-Chloroaniline	ug/L	10	ND	04/18/94
4-Chlorophenyl phenyl ether	ug/L	10	ND	04/18/94
Chrysene	ug/L	10	ND	04/18/94
Dibenzo(a,h)anthracene	ug/L	10	ND	04/18/94
1,2-Dichlorobenzene	ug/L	10	ND	04/18/94
1,3-Dichlorobenzene	ug/L	10	ND	04/18/94
1,4-Dichlorobenzene	ug/L	10	ND	04/18/94



2 4 0100

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 5April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

PAGE Sample Number:	90 0421389		
Date Collected:	04/13/94		
Time Collected:	13:20		
Date Received:	04/13/94		
Client Sample ID:	CO-PW-TANK		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		02	

ORGANIC ANALYSIS**8270 SEMIVOLATILE ORGANIC COMPOUNDS**

3,3-Dichlorobenzidine	ug/L	10	ND	04/18/94
Dibenzofuran	ug/L	10	ND	04/18/94
Diethyl phthalate	ug/L	10	ND	04/18/94
Dimethyl phthalate	ug/L	10	ND	04/18/94
Di-n-butyl phthalate	ug/L	10	ND	04/18/94
2,4-Dinitrotoluene	ug/L	10	ND	04/18/94
2,6-Dinitrotoluene	ug/L	10	ND	04/18/94
Di-n-octyl phthalate	ug/L	10	ND	04/18/94
Fluoranthene	ug/L	10	ND	04/18/94
Fluorene	ug/L	10	ND	04/18/94
Hexachlorocyclopentadiene	ug/L	10	ND	04/18/94
Hexachlorobenzene	ug/L	10	ND	04/18/94
Hexachlorobutadiene	ug/L	10	ND	04/18/94
Hexachloroethane	ug/L	10	ND	04/18/94
Indeno(1,2,3-c,d)pyrene	ug/L	10	ND	04/18/94
Isophorone	ug/L	10	ND	04/18/94
2-Methylnaphthalene	ug/L	10	ND	04/18/94
Naphthalene	ug/L	10	ND	04/18/94
2-Nitroaniline	ug/L	10	ND	04/18/94
3-Nitroaniline	ug/L	10	ND	04/18/94
4-Nitroaniline	ug/L	10	ND	04/18/94
Nitrobenzene	ug/L	10	ND	04/18/94
N-Nitrosodi-n-propylamine	ug/L	10	ND	04/18/94
N-Nitrosodiphenylamine	ug/L	10	ND	04/18/94
Phenanthrene	ug/L	10	ND	04/18/94
Pyrene	ug/L	10	ND	04/18/94
1,2,4-Trichlorobenzene	ug/L	10	ND	04/18/94
2-Chlorophenol	ug/L	10	ND	04/18/94
2-Methylphenol	ug/L	10	ND	04/18/94
4-Chloro-3-methylphenol	ug/L	10	ND	04/18/94
4-Methylphenol	ug/L	10	ND	04/18/94



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 6April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

PACE Sample Number:		90 0421389	
Date Collected:		04/13/94	
Time Collected:		13:20	
Date Received:		04/13/94	
Client Sample ID:		CO-PW-TANK	
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		02	

ORGANIC ANALYSIS

8270 SEMIVOLATILE ORGANIC COMPOUNDS

2,4-Dichlorophenol	ug/L	10	ND	04/18/94
2,4-Dimethylphenol	ug/L	10	ND	04/18/94
2,4-Dinitrophenol	ug/L	10	ND	04/18/94
2-Methyl-4,6-Dinitrophenol	ug/L	10	ND	04/18/94
2-Nitrophenol	ug/L	10	ND	04/18/94
4-Nitrophenol	ug/L	10	ND	04/18/94
Pentachlorophenol	ug/L	10	ND	04/18/94
Phenol	ug/L	10	ND	04/18/94
2,4,5-Trichlorophenol	ug/L	10	ND	04/18/94
2,4,6-Trichlorophenol	ug/L	10	ND	04/18/94
Phenol-d6 - Surrogate	%		31	04/18/94
2-Fluorophenol - Surrogate	%		39	04/18/94
Nitrobenzene-d5 - Surrogate	%		42	04/18/94
2-Fluorobiphenyl - Surrogate	%		58	04/18/94
2,4,6-Tribromophenol - Surrogate	%		34	04/18/94
Terphenyl-d14 - Surrogate	%		62	04/18/94

These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic ChemistryMichael W. Palmer
Manager, Organic Chemistry



2 4 0102

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 7FOOTNOTES
for pages 1 through 6April 21, 1994
PACE Project Number: 2404135

Client Reference: CHEVRON ORLANDO PHASE II

ND Not detected at or above the PRL.
PRL PACE Reporting Limit



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REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

Arsenic EPA 206.2
Batch: 90 50927
Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>
Arsenic EPA 206.2	ug/L	10	<u>Blank</u>
			ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900421133</u>	<u>Spike</u>	<u>Spike</u>	<u>Dupl</u>	<u>RP</u>
Arsenic EPA 206.2	ug/L	10	ND	40	87%	84%	4

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	<u>Value</u>	<u>Recx</u>
Arsenic EPA 206.2	ug/L	10		40	87%



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

Chromium

Batch: 90 50914

Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Chromium	ug/L	5	ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900421117</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RE</u>
Chromium	ug/L	5	21	40	66% (1)	67%	2

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recv</u>
Chromium	ug/L	5	40	93%



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REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

Lead EPA 239.2
Batch: 90 50916
Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>
Lead EPA 239.2	ug/L	5	Blank
			ND

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900420951</u>	<u>Spike</u>	<u>Spike</u>	<u>Dupl</u>	<u>Recy</u>	<u>Recy</u>	<u>RF</u>
Lead EPA 239.2	ug/L	5	34	40	104%	103%			

LABORATORY CONTROL SAMPLE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	<u>Value</u>	<u>Recy</u>
Lead EPA 239.2	ug/L	5		40	108%



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 50891

Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
INDIVIDUAL PARAMETERS			
Iso-propyl ether	ug/L	2.0	ND
601/602 - VOLATILE HALOCARBONS/AROMATICS			
Chloromethane	ug/L	2.4	ND
Bromomethane	ug/L	4.0	ND
Dichlorodifluoromethane	ug/L	2.1	ND
Vinyl Chloride	ug/L	0.8	ND
Chloroethane	ug/L	1.4	ND
Methylene chloride	ug/L	5.0	ND
Trichlorofluoromethane	ug/L	0.5	ND
1,1-Dichloroethylene	ug/L	0.5	ND
1,1-Dichloroethane	ug/L	0.6	ND
trans-1,2-Dichloroethylene	ug/L	0.8	ND
Chloroform	ug/L	1.0	ND
1,2-Dichloroethane	ug/L	1.0	ND
1,1,1-Trichloroethane	ug/L	0.8	ND
Carbon Tetrachloride	ug/L	0.5	ND
Bromodichloromethane	ug/L	0.6	ND
1,2-Dichloropropane	ug/L	0.5	ND
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND
1,1,2-Trichloroethylene	ug/L	0.9	ND
Dibromochloromethane	ug/L	1.0	ND
1,1,2-Trichloroethane	ug/L	1.0	ND
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND
Bromoform	ug/L	2.0	ND
1,1,2,2-Tetrachloroethane	ug/L	0.4	ND
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND
Methyl Tert-Butyl Ether	ug/L	5.0	ND
Benzene	ug/L	0.5	ND
Toluene	ug/L	1.0	ND
Chlorobenzene	ug/L	1.3	ND



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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 50891

Samples: 90 0421389

METHOD BLANK:

Parameter	Units	PRL	Method Blank
Ethylbenzene	ug/L	0.9	ND
Xylenes	ug/L	0.9	ND
1,3-Dichlorobenzene	ug/L	1.1	ND
1,4-Dichlorobenzene	ug/L	1.0	ND
1,2-Dichlorobenzene	ug/L	1.0	ND
Total VOA	ug/L	0.5	ND

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	PRL	930200974	Spike	Spike Recv	Dupl Recv	RF
Chloromethane	ug/L	2.4	ND	20	100%	95%	E
Bromomethane	ug/L	4.0	ND	20	105%	100%	E
Dichlorodifluoromethane	ug/L	2.1	ND	20	95%	90%	E
Vinyl Chloride	ug/L	0.8	ND	20	105%	90%	1E
Chloroethane	ug/L	1.4	ND	20	105%	105%	C
Methylene chloride	ug/L	5.0	ND	20	95%	100%	E
Trichlorofluoromethane	ug/L	0.5	ND	20	115%	110%	C
1,1-Dichloroethylene	ug/L	0.5	ND	20	115%	115%	C
1,1-Dichloroethane	ug/L	0.6	ND	20	110%	110%	C
trans-1,2-Dichloroethylene	ug/L	0.8	ND	20	115%	110%	C
Chloroform	ug/L	1.0	ND	20	110%	115%	C
1,2-Dichloroethane	ug/L	1.0	ND	20	110%	110%	C
1,1,1-Trichloroethane	ug/L	0.8	ND	20	110%	110%	C
Carbon Tetrachloride	ug/L	0.5	ND	20	110%	110%	C
Bromodichloromethane	ug/L	0.6	ND	20	105%	105%	C
1,2-Dichloropropane	ug/L	0.5	ND	20	115%	115%	C
trans-1,3-Dichloro-1-propene	ug/L	0.8	ND	20	100%	100%	C
1,1,2-Trichloroethylene	ug/L	0.9	ND	20	105%	115%	C
Dibromochloromethane	ug/L	1.0	ND	20	105%	110%	E
1,1,2-Trichloroethane	ug/L	1.0	ND	20	105%	105%	C
cis-1,3-Dichloro-1-propene	ug/L	0.7	ND	20	110%	115%	C
Bromoform	ug/L	2.0	ND	20	135%	135%	C



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 50891

Samples: 90 0421389

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>930200974</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
1,1,2,2-Tetrachloroethane	ug/L	0.4	ND	20	120%	125%	4%
1,1,2,2-Tetrachloroethylene	ug/L	0.9	ND	20	100%	100%	0%
Methyl Tert-Butyl Ether	ug/L	5.0	ND	20	105%	99.0	162% (2)
Benzene	ug/L	0.6	ND	20	100%	105%	5%
Toluene	ug/L	1.0	6.9	20	101%	101%	0%
Chlorobenzene	ug/L	1.3	ND	20	100%	100%	0%
Ethylbenzene	ug/L	0.9	ND	20	105%	105%	0%
Xylenes	ug/L	0.9	ND	50	103%	105%	2%
1,3-Dichlorobenzene	ug/L	1.1	ND	20	100%	105%	5%
1,4-Dichlorobenzene	ug/L	1.0	ND	20	100%	100%	0%
1,2-Dichlorobenzene	ug/L	1.0	ND	20	85%	85%	0%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Dupl RPD</u>
INDIVIDUAL PARAMETERS					
Iso-propyl ether	ug/L	2.0	20	35%	95% 11
601/602 - VOLATILE HALOCARBONS/AROMATICS					
Chloromethane	ug/L	2.4	20	115%	115% 0
Bromomethane	ug/L	4.0	20	115%	115% 0
Dichlorodifluoromethane	ug/L	2.1	20	105%	100% 5
Vinyl Chloride	ug/L	0.8	20	110%	105% 5
Chloroethane	ug/L	1.4	20	120%	115% 4
Methylene chloride	ug/L	5.0	20	95%	95% 0
Trichlorofluoromethane	ug/L	0.5	20	105%	95% 10
1,1-Dichloroethylene	ug/L	0.5	20	110%	110% 0
1,1-Dichloroethane	ug/L	0.6	20	125%	125% 0
trans-1,2-Dichloroethylene	ug/L	0.8	20	115%	115% 0
Chloroform	ug/L	1.0	20	120%	120% 0
1,2-Dichloroethane	ug/L	1.0	20	115%	115% 0



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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

601/602 - VOLATILE HALOCARBONS/AROMATICS

Batch: 90 50891

Samples: 90 0421389

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	PRL	Reference Value	Dup1 Recv	Dup1 Recv	RPD
1,1,1-Trichloroethane	ug/L	0.8	20	120%	115%	4
Carbon Tetrachloride	ug/L	0.5	20	115%	120%	4
Bromodichloromethane	ug/L	0.6	20	100%	110%	10
1,2-Dichloropropane	ug/L	0.5	20	110%	110%	0
trans-1,3-Dichloro-1-propene	ug/L	0.8	20	115%	120%	4
1,1,2-Trichloroethylene	ug/L	0.9	20	120%	120%	0
Dibromochloromethane	ug/L	1.0	20	115%	120%	4
1,1,2-Trichloroethane	ug/L	1.0	20	110%	110%	0
cis-1,3-Dichloro-1-propene	ug/L	0.7	20	115%	115%	0
Bromoform	ug/L	2.0	20	130%	140%	7
1,1,2,2-Tetrachloroethane	ug/L	0.4	20	120%	130%	8
1,1,2,2-Tetrachloroethylene	ug/L	0.9	20	105%	110%	5
Methyl Tert-Butyl Ether	ug/L	5.0	20	90%	90%	0
Benzene	ug/L	0.6	20	110%	110%	0
Toluene	ug/L	1.0	20	110%	110%	0
Chlorobenzene	ug/L	1.3	20	110%	110%	0
Ethylbenzene	ug/L	0.9	20	110%	110%	0
Xylenes	ug/L	0.9	60	113%	112%	1
1,3-Dichlorobenzene	ug/L	1.1	20	105%	100%	5
1,4-Dichlorobenzene	ug/L	1.0	20	105%	105%	0
1,2-Dichlorobenzene	ug/L	1.0	20	90%	90%	0



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

8080 ORGANOCHLORINE PESTICIDES AND PCB'S
Batch: 90 50987
Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
a-BHC	ug/L	0.05	ND
b-BHC	ug/L	0.05	ND
g-BHC	ug/L	0.05	ND
d-BHC	ug/L	0.05	ND
Heptachlor	ug/L	0.05	ND
Aldrin	ug/L	0.05	ND
Heptachlor epoxide	ug/L	0.05	ND
Endosulfan I	ug/L	0.05	ND
Dieldrin	ug/L	0.1	ND
Endrin	ug/L	0.1	ND
4,4-DDD	ug/L	0.1	ND
Endosulfan II	ug/L	0.1	ND
4,4-DDT	ug/L	0.1	ND
4,4-DDE	ug/L	0.1	ND
Endrin aldehyde	ug/L	0.1	ND
Endosulfan sulfate	ug/L	0.1	ND
Chlordane	ug/L	1.0	ND
Methoxychlor	ug/L	0.5	ND
Toxaphene	ug/L	3.0	ND
PCB-1016	ug/L	0.5	ND
PCB-1221	ug/L	0.5	ND
PCB-1232	ug/L	0.5	ND
PCB-1242	ug/L	0.1	ND
PCB-1248	ug/L	0.1	ND
PCB-1254	ug/L	0.5	ND
PCB-1260	ug/L	0.5	ND
2,4,5,6-Tetrachloro m-xylene - surrogat %		0.1	100



2 4 0111

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

8080 ORGANOCHLORINE PESTICIDES AND PCB'S

Batch: 90 50987

Samples: 90 0421389

SPIKE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900419570</u>	<u>Spike</u>	<u>Spike Recy</u>
g-BHC	ug/L	0.050	ND DS		
g-BHC	ug/L	0.05		2.0	37%
Endrin	ug/L	0.10	ND DS		
Endrin	ug/L	0.1		2.0	50%
Methoxychlor	ug/L	0.50	ND DS		
Methoxychlor	ug/L	0.5		2.0	54%
Heptachlor	ug/L	0.050	ND DS		
Heptachlor	ug/L	0.05		2.0	34%
Heptachlor epoxide	ug/L	0.050	ND DS		
Heptachlor epoxide	ug/L	0.05		2.0	45%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Dupl Recy</u>	<u>Dupl Recy</u>	<u>RPC</u>
a-BHC	ug/L	0.05	2.0	32%	13%	84
(3)						
b-BHC	ug/L	0.05	2.0	54%	44%	20
g-BHC	ug/L	0.05	2.0	35%	16%	75
(4)						
d-BHC	ug/L	0.05	2.0	55%	42%	27
(4)						
Heptachlor	ug/L	0.05	2.0	21%	9%	80
(4)						
(3)						
Aldrin	ug/L	0.05	2.0	20%	9%	76
(4)						
(3)						
Heptachlor epoxide	ug/L	0.05	2.0	48%	33%	37
(4)						
(3)						
Endosulfan I	ug/L	0.05	2.0	53%	40%	28
Dieldrin	ug/L	0.1	2.0	58%	46%	23
Endrin	ug/L	0.1	2.0	67%	56%	18



2 4

0112

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

8080 ORGANOCHLORINE PESTICIDES AND PCB'S

Batch: 90 50987

Samples: 90 0421389

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Recv</u>	<u>RPC</u>
4,4-DDD	ug/L	0.1	2.0	94%	84%	11
Endosulfan II	ug/L	0.1	2.0	81%	71%	13
4,4-DDT	ug/L	0.1	2.0	74%	76%	3
4,4-DDE	ug/L	0.1	2.0	63%	55%	14
Endrin aldehyde	ug/L	0.1	2.0	80%	68%	16
Endosulfan sulfate	ug/L	0.1	2.0	101%	88%	14



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REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Batch: 90 50896

Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Acenaphthene	ug/L	10	ND
Acenaphthylene	ug/L	10	ND
Anthracene	ug/L	10	ND
Benzoic Acid	ug/L	10	ND
Benzo(a)anthracene	ug/L	10	ND
Benzo(a)pyrene	ug/L	10	ND
Benzo(b)fluoranthene	ug/L	10	ND
Benzo(k)fluoranthene	ug/L	10	ND
Benzo(g,h,i)perylene	ug/L	10	ND
Benzyl Alcohol	ug/L	10	ND
4-Bromophenyl phenyl ether	ug/L	10	ND
Butyl benzyl phthalate	ug/L	10	ND
Bis(2-ethyl hexyl)phthalate	ug/L	10	ND
Bis(2-chloroethoxy)methane	ug/L	10	ND
Bis(2-chloroethyl)ether	ug/L	10	ND
Bis(2-chloroisopropyl)ether	ug/L	10	ND
2-Chloronaphthalene	ug/L	10	ND
4-Chloroaniline	ug/L	10	ND
4-Chlorophenyl phenyl ether	ug/L	10	ND
Chrysene	ug/L	10	ND
Dibenzo(a,h)anthracene	ug/L	10	ND
1,2-Dichlorobenzene	ug/L	10	ND
1,3-Dichlorobenzene	ug/L	10	ND
1,4-Dichlorobenzene	ug/L	10	ND
3,3-Dichlorobenzidine	ug/L	10	ND
Dibenzofuran	ug/L	10	ND
Diethyl phthalate	ug/L	10	ND
Dimethyl phthalate	ug/L	10	ND
Di-n-butyl phthalate	ug/L	10	ND
2,4-Dinitrotoluene	ug/L	10	ND
2,6-Dinitrotoluene	ug/L	10	ND
Di-n-octyl phthalate	ug/L	10	ND



2 4

0114

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 19

QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS

Batch: 90 50896

Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
Fluoranthene	ug/L	10	ND
Fluorene	ug/L	10	ND
Hexachlorocyclopentadiene	ug/L	10	ND
Hexachlorobenzene	ug/L	10	ND
Hexachlorobutadiene	ug/L	10	ND
Hexachloroethane	ug/L	10	ND
Indeno(1,2,3-c,d)pyrene	ug/L	10	ND
Isophorone	ug/L	10	ND
2-Methylnaphthalene	ug/L	10	ND
Naphthalene	ug/L	10	ND
2-Nitroaniline	ug/L	10	ND
3-Nitroaniline	ug/L	10	ND
4-Nitroaniline	ug/L	10	ND
Nitrobenzene	ug/L	10	ND
N-Nitrosodi-n-propylamine	ug/L	10	ND
N-Nitrosodiphenylamine	ug/L	10	ND
Phenanthrene	ug/L	10	ND
Pyrene	ug/L	10	ND
1,2,4-Trichlorobenzene	ug/L	10	ND
2-Chlorophenol	ug/L	10	ND
2-Methylphenol	ug/L	10	ND
4-Chloro-3-methylphenol	ug/L	10	ND
4-Methylphenol	ug/L	10	ND
2,4-Dichlorophenol	ug/L	10	ND
2,4-Dimethylphenol	ug/L	10	ND
2,4-Dinitrophenol	ug/L	10	ND
2-Methyl-4,6-Dinitrophenol	ug/L	10	ND
2-Nitrophenol	ug/L	10	ND
4-Nitrophenol	ug/L	10	ND
Pentachlorophenol	ug/L	10	ND
Phenol	ug/L	10	ND
2,4,5-Trichlorophenol	ug/L	10	ND



240115

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 20

QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

8270 SEMIVOLATILE ORGANIC COMPOUNDS
Batch: 90 50896
Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
2,4,6-Trichlorophenol	ug/L	10	ND
Phenol-d6 - Surrogate	%		40
2-Fluorophenol - Surrogate	%		50
Nitrobenzene-d5 - Surrogate	%		64
2-Fluorobiphenyl - Surrogate	%		70
2,4,6-Tribromophenol - Surrogate	%		47
Terphenyl-d14 - Surrogate	%		68

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Recv</u>	<u>RPD</u>
Acenaphthene	ug/L	10	50	74%	64%	14
1,4-Dichlorobenzene	ug/L	10	50	66%	56%	16
2,4-Dinitrotoluene	ug/L	10	50	72%	60%	18
N-Nitrosodi-n-propylamine	ug/L	10	50	68%	60%	13
Pyrene	ug/L	10	50	72%	66%	9
1,2,4-Trichlorobenzene	ug/L	10	50	68%	56%	19
2-Chlorophenol	ug/L	10	50	62%	52%	18
4-Chloro-3-methylphenol	ug/L	10	50	66%	56%	16
4-Nitrophenol	ug/L	10	50	28%	8%	111
Pentachlorophenol	ug/L	10	50	58%	40%	37
Phenol	ug/L	10	50	52%	42%	21



2 4

0116

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 21

QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 24041357

Client Reference: CHEVRON ORLANDO PHASE II

ORGANOPHOSPHORUS PESTICIDES (EPA 8140)

Batch: 90 50988

Samples: 90 0421389

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Method Blank</u>
Dichlorvos	ug/L	5.0	ND
Mevinphos	ug/L	5.0	ND
Demeton-S	ug/L	5.0	ND
Ethoprop	ug/L	5.0	ND
Naled	ug/L	5.0	ND
Phorate	ug/L	5.0	ND
Demeton-O	ug/L	5.0	ND
Diazinon	ug/L	5.0	ND
Disulfoton	ug/L	5.0	ND
Parathion Methyl	ug/L	5.0	ND
Ronnel	ug/L	5.0	ND
Chlorpyrifos	ug/L	5.0	ND
Fenthion	ug/L	5.0	ND
Fensulfothion	ug/L	5.0	ND
Trichloronate	ug/L	5.0	ND
Stirophos	ug/L	5.0	ND
Tokuthion	ug/L	5.0	ND
Merphos	ug/L	5.0	ND
Bolstar	ug/L	5.0	ND
Azinphos Methyl (Guthion)	ug/L	5.0	ND
Coumaphos	ug/L	5.0	ND
1,3-Dimethyl-2-nitrobenzene	%	0.01	23



2 4 0117

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 22FOOTNOTES
for pages 8 through 21April 21, 1994
PACE Project Number: 2404135

Client Reference: CHEVRON ORLANDO PHASE II

- @ Percent recovery exceeds 999%
- DS Concentration found on diluted sample.
- ND Not detected at or above the PRL.
- PRL PACE Reporting Limit
- RPD Relative Percent Difference
- (1) Matrix interference.
- (2) Possible contamination from previous run in same sample position.
- (3) Duplicate injection results exceed control limits.
- (4) Spiked sample recovery is not within control limits.

168239

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client TASK Environmental
 Address 710 S. Howard Ave
Tampa FL 33606
 Phone (254) 8838

Report To: Susan Tobi

Pace Client No.

Bill To:

Pace Project Manager

P.O. # / Billing Reference

Pace Project No. 240413 575

Project Name / No. Chevron Orlando

Requested Due Date:

Sampled By (PRINT):

P. Krouse

Sampler Signature

M. B. Krouse

Date Sampled

4/13/94

ITEM NO	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES				ANALYSES REQUESTS						REMARKS	
						UNPRESERVED	H ₂ SO ₄	HNO ₃	VGA	Flat 1/2L	8080F	82140	8270	Metal (RE-CHAM)	PCP	TRX	
1	CO-PN-TANK-02	1320	water		3	X	X	X	X	X	X	X	X	X	X	X	04/18
2																	
3																	
4																	
5																	
6																	
7																	
8																	

ITEM NO	SHIPPING METHOD	SHIP DATE	RETURNED DATE	ITEM NO	RElinquished BY	AFFILIATION	ACCEPTED BY	AFFILIATION	DATE	TIME

Additional Comments

<u>M. B. Krouse</u>	<u>G. Chardis</u>	<u>4/13/94 15:50</u>
---------------------	-------------------	----------------------

SEE REVERSE SIDE FOR INSTRUCTIONS

2 4 0119

**APPENDIX B
WASTE DISPOSAL MANIFESTS**

24 0120

DRIVER: PLEASE SIGN HERE

Robert Johnson

Printed on recycled paper

TICKET NO.

Springhill Landfill
 P.O. Box 706
 Cottontale, FL 32431-0000

Page: 01 of 01

0009241

ORIGINAL

HAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	495	TJ	9:08AM	9:20AM	4/16/94

CHEM WASTE - HOUSTON
 13TH FLOOR
 100 GLENBOROUGH
 HOUSTON, TX 77067-0000

GROSS POUNDS : 45,320.00IN-1
 TARE POUNDS : 32,380.00OUT-1
 NET POUNDS : 12,940.00

THANK YOU. DRIVE SAFE!!
 FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 12,940.00

SOURCES	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL 0-16T-2 100N 100E
MATERIAL CODE/DESCRIPTION	QUANTITY
868 -CONTAMINATED SOIL	6.47 TONS

24 0122

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Springhill Landfill
 P.O. Box 706
 Cottontale, FL 32431-0000

Page: 01 of 01

TICKET-NR.

0009236

ORIGINAL

HANDLER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	426	TJ	0721AM	0737AM	4/16/94

CHEM WASTE - HOUSTON
 13TH FLOOR
 100 BLENBOROUGH
 HOUSTON, TX 77067-0000

GROSS POUNDS	:	54,720.00	IN-1
TARE POUNDS	:	31,940.00	OUT-1
NET POUNDS	:	22,780.00	

THANK YOU. DRIVE SAFE!!
 FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 22,780.00

SOURCE	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL 0-16T-2 100N 100E

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
568 -CONTAMINATED SOIL	11.39	TONS		

Springhill Regional Landfill and Recycling Facility
4945 Highway 273
Graceville, FL 32440
(304) 263-7100

19 94



A Waste Management Company

24 0123

NON-HAZARDOUS MANIFEST
GENERATOR

Generator CHEVRON CHEMICAL CO.
Address 6001 POLLINGER CANYON RD
SAN RAMON CA 94583
Phone (510) 842-5883

I.D. # _____
Shipping Location 3100 N. ORANGE BLOSSOM T
Address ORLANDO FL 32804
Phone NONE _____

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
<u>SOIL</u>	<u>WMNA</u> <u>003470</u>	<u>11.39</u>	<u>TONS</u>	<u>20 x 20³ ROLLOFF</u> <u>BOX</u>

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen J. Tobin

Generator Authorized Agent Name (Print)

Allen J. Tobin

4 - 94
Delivery Date

TRANSPORTER

Transporter Name UNIFL MGT OF ORLANDO INC Driver Name (Print) GEORGE FIELDS
Address 6001 VINE LAND ROAD
ORLANDO, FL 32819 Truck Number 426
Truck Type MACK

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

George Fields 4-5-94
Driver Signature Shipment Date

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

George Fields 4-16-94
Driver Signature Delivery Date

DESTINATION

Site Name SPRINGHILL REGIONAL LANDFILL Phone Number 904-263-7100

Address 4945 HIGHWAY 273 GRACEVILLE, FL 32440

Postal Locations: Cell D Grid 16T Level 2 Sample Information: PLK

I hereby acknowledge receipt of the above-described materials.

Tina Johnson
Name of Authorized (Print)

Sample Taken By: J. Johnson

Signature

Receipt Date

24 0124

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Springhill Landfill
 P.O. Box 706
 Cottontale, FL 32431-0000

Page: 01 of 01

8009238

TICKET NO.

ORIGINAL

TAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	497	TJ	8:58AM	9:10AM	4/16/94

CHEM WASTE - HOUSTON
 13TH FLOOR
 100 GLENBOROUGH
 HOUSTON, TX 77067-0000

GROSS POUNDS : 51,640.00IN-1
 TARE POUNDS : 30,760.00OUT-1
 NET POUNDS : 20,880.00

THANK YOU. DRIVE SAFE!!
 FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 20,880.00

SOURCES	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL 0-16T-2 100N 100E

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
S66 -CONTAMINATED SOIL	10.44	TONS		

24 - 0126

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

TICKET NUMBER

0009242

Springhill Landfill
P.O. Box 706
Cottontale, FL 32431-0000

Page: 01 of 01

ORIGINAL

HAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	491	TJ	9:08AM	9:22AM	4/18/94

CHEM WASTE - HOUSTON
13TH FLOOR
100 GLENBOROUGH
HOUSTON, TX 77067-0000

GROSS POUNDS : 54,660.00IN-1
TARE POUNDS : 31,880.00OUT-1
NET POUNDS : 22,780.00

THANK YOU. DRIVE SAFE!!
FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 22,780.00

SOURCES	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL Q-16T-2 100N 100E

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
S68 -CONTAMINATED SOIL	11.39	TONS		

Springhill Regional Landfill and Recycling Facility
4945 Highway 273
Graceville, FL 32440
(304) 263-7100



A Waste Management Company

2 4 0127

19 9

NON-HAZARDOUS MANIFEST GENERATOR

No 4211

Generator CHEVRON CHEMICAL CO.
Address 6001 BORRINGER CENTRAL RD.
SAN RAMON CA 945P3
Phone (510) 842-5843

ID # _____

Shipping Location 3100 N. ORANGE BEACH

Address ORLANDO FL 32804

Phone 407-841-2001

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
<u>SOIL</u>	<u>WMNA 203470</u>	<u>1.5 (1)</u>	<u>TONS</u>	<u>20 YD³ ROLL OFF BOX</u>
		<u>11.39</u>	<u>TONS</u>	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen J. Tobia)

Generator Authorized Agent Name (Print)

Allen J. Tobia

Delivery Date

TRANSPORTER

Transporter Name WASTE MGT OF ORLANDO, FL Driver Name (Print) KENNETH HAMMONDS
Address 6001 VINELAND ROAD
ORLANDO FL 32819 Truck Number 491
Truck Type Volvo

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

Kenneth J. Hammonds - 5 - 94
Driver Signature Shipment Date

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

Kenneth J. Hammonds
Driver Signature Delivery Date
4-16-94

DESTINATION

Site Name SPRINGHILL REGIONAL LANDFILL Phone Number _____
Address 4945 HIGHWAY 273 GRACEVILLE, FL 32440
Disposal Locations: Cell 0 Grid 167 Level 2 Sample Information: PK

I hereby acknowledge receipt of the above-described materials.

Tina Johnson
Name of Authorized (Print)

Sample Taken By: Tina Johnson Receipt Date 4/14/94
Signature

24 0128

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Laney Clark

Springhill Landfill
P.O. Box 706
Cottontale, FL 32431-0000

Page: 01 of 01

0007467

ORIGINAL

SHIPPING CHALLER'S NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	982	TJ	6:49AM	7:19AM	3/26/94

CHEM WASTE - HOUSTON 13TH FLOOR 100 GLENBOROUGH HOUSTON, TX 77067-0000	GROSS POUNDS : 73,580.00IN-1
	TARE POUNDS : 22,780.00OUT-1
	NET POUNDS : 50,800.00

THANK YOU. DRIVE SAFE!!
FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 50,800.00

SOURCE	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL 0-1ST-2 100N 100E

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	AMOUNT
S68 -CONTAMINATED SOIL	25.40	TONS	\$32.000 \$812.80
TOTAL AMOUNT			\$812.80

24 0130

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

R. Hayes

Springhill Landfill
P.O. Box 706
Cottondale, FL 32431-0000

Page: 01 of 01

0007468

ORIGINAL

HAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	974	TJ	6:52AM	7:23AM	3/26/94

CHEM WASTE - HOUSTON
13TH FLOOR
100 GLENBOROUGH
HOUSTON, TX 77067-0000

GROSS POUNDS : 77,780.00 IN-1
TARE POUNDS : 28,740.00 OUT-1
NET POUNDS : 49,040.00

THANK YOU. DRIVE SAFE!!
FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 49,040.00

ORANGE

CONTAMINATED SOIL
0-1ST-2 100N 100E



MATERIAL DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
S68 -CONTAMINATED SOIL	24.52	TONS		

24 0132

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Dr. Walter

Springhill Landfill
P.O. Box 706
Cottontdale, FL 32431-0000

Page: 01 of 01

-0007484-

ORIGINAL

OWNER/SHEDLER NAME	STRUCK BY	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	203	TJ	6:44AM	8:27AM	3/26/94

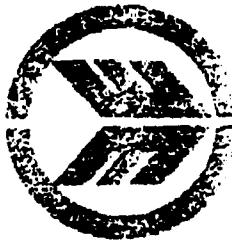
CHEM WASTE - HOUSTON
13TH FLOOR
100 GLENBOROUGH
HOUSTON, TX 77067-0000

GROSS POUNDS	:	75,440.00	IN-1
TARE POUNDS	:	31,220.00	OUT-1
NET POUNDS		<hr/>	
	:	44,220.00	

THANK YOU. DRIVE SAFE!!
FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 44,220.00

ORANGE



CONTAMINATED SOIL
0-15T-2 100N 100E

ITEM NUMBER	MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	SHIPPING POINT AND DATE	
				PORT	DATE
S68	-CONTAMINATED SOIL	22.11	TONS		

Springhill Regional Landfill and Recycling Facility
4945 Highway 273
Graceville, FL 32440
(804) 263-7100

1991

240133



A Waste Management Company

NON-HAZARDOUS MANIFEST GENERATOR

No 5625

Generator Chevron Chemical Co.
Address 16001 Bollinger Canyon Rd
San Ramon, CA 94583
Phone (510) 842-5883

I.D. # _____
Shipping Location #3100 N. Orange Blossom Trl
Address Orlando, FL 32804
Phone None

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
<u>Soil</u>	<u>WMNR</u> <u>203470</u>	<u>22.22</u>	<u>TONS</u>	<u>SEMI TRAILER</u>
		<u>22.11</u>	<u>TONS</u>	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen Johnson

Generator Authorized Agent Name (Print)

Allen J. Johnson

3-25-94

Signature

Delivery Date

TRANSPORTER

Transporter Name C.W.I. TRANSPORT INC.
Address 317 ENTERPRISE ST.
OCEAN, FL 34761

Driver Name (Print) JOE DUKE

Truck Number 203

Truck Type KW

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

X John Duke

Driver Signature

3-25-94
Shipment Date

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

X John Duke

3-25-94
Delivery Date

Driver Signature

DESTINATION

Site Name SPRINGHILL REGIONAL LANDFILL Phone Number 904-263-7100

Address 4945 HIGHWAY 273 GRACEVILLE, FL 32440

Disposal Locations: Cell 0 Grid 15T Level 2 Sample Information: None

I hereby acknowledge receipt of the above-described materials.

TINA JOHNSON

Name of Authorized (Print)

Sample Taken By:

Tina Johnson

Receipt Date

24 0134

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Wayne Bush

Springhill Landfill
 P.O. Box 706
 Cottontale, FL 32431-0000

Page: 01 of 01



ORIGINAL

SHED NUMBER	HAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
	CHEM WASTE - HOUSTON	177	LJ	7:02AM	7:40AM	3/26/94

CHEM WASTE - HOUSTON
 13TH FLOOR
 100 GLENBOROUGH
 HOUSTON, TX 77067-0000

GROSS POUNDS : 79,440.00IN-1
 TARE POUNDS : 27,740.00OUT-1
 NET POUNDS : 51,700.00

THANK YOU. DRIVE SAFE!!
 FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 51,700.00

SOURCES	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL 0-15T-2 100N 100E



MATERIAL CODE/DESCRIPTION	WEIGHT	MEASURE	RATE	AMOUNT
S68 -CONTAMINATED SOIL	25.85	TONS		

Springhill Regional Landfill and Recycling Facility
4945 Highway 273
Gracerville, FL 32440
(904) 262-7100

19 44

2 4 0135



A Waste Management Company

NON-HAZARDOUS MANIFEST GENERATOR

No 5618

Generator Chevron Chemical Co.
Address 6001 Bollinger Canyon Rd.
San Ramon, CA 94583
Phone (510) 842-5983

I.D. # _____
Shipping Location 3100 N. Orange Blossom Trail
Address Orlando, FL 32804
Phone none

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
Soil	WMNTA 203470	25 1/2	tons	semi-trailer
		25.85	Tons	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen Tobin

Generator Authorized Agent Name (Print)

Allen Tobin

3-25-94

Signature

Delivery Date

TRANSPORTER

Transporter Name C&W Transport Inc.
Address 317 Enterprise St.
Ocoee, FL 34761

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

Wayne Bell

Driver Signature

3-25-94

Shipment Date

Driver Name (Print) Wayne Bell

Truck Number 177

Truck Type Freightline

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

Wayne Bell

3-25-94

Driver Signature

Delivery Date

DESTINATION

Site Name Springhill Regional Landfill
Address 4945 Highway 273 Gracerville, FL 32440

Disposal Locations: Cell 0 Grid K7 Level 2

Phone Number 904-263-7102

Dry

I hereby acknowledge receipt of the above-described materials.

Tina Johnson

Name of Authorized (Print)

Sample Information: Dry

Sample Taken By: Tina Johnson

Signature

Receipt Date

24 0136

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Beverly Lewis

Springhill Landfill
 P.O. Box 706
 Cottontale, FL 32431-0000

Page: 01 of 01

TICKET NO. 0007480

ORIGINAL

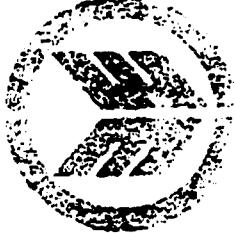
HAILER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	162	T.J.	7:09AM	8:06AM	3/26/94

CHEM WASTE - HOUSTON
 13TH FLOOR
 100 GLENBOROUGH
 HOUSTON, TX 77067-0000

GROSS POUNDS :	79,980.00	IN-1
TARE POUNDS :	28,640.00	OUT-1
NET POUNDS :	51,340.00	

THANK YOU. DRIVE SAFE!!
 FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 51,340.00

SOURCES	OTHER INFORMATION			
ORANGE	CONTAMINATED SOIL 0-15T-2 100N 100E			
				
MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
S68 -CONTAMINATED SOIL	25.67	TONS		

Springhill Regional Landfill and Recycling Facility
4945 Highway 273
Graceville, FL 32440
(800) 263-7100



A Waste Management Company

240137

1994

**NON-HAZARDOUS MANIFEST
GENERATOR**

Generator Chevron Chemical Co.
Address 6001 Bollinger Canyon Rd.
San Ramon, CA 94583
Phone (510) 842-5883

I.D. # _____
Shipping Location 3100 N. Orange Blossom Tr.
Address Orlando, FL 32804
Phone none

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
Soil	WMNR 203470	25	tons	Semi-trailer
		25.01	Tons	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen Tobin

Generator Authorized Agent Name (Print)

Allen Tobin

3-25-94

Signature

Delivery Date

TRANSPORTER

Transporter Name C & W Transport Inc
Address 317 Enterprise St.
Ocoee, FL 34761

Driver Name (Print) Henry Lewis
Truck Number 162
Truck Type Freightliner

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

Henry Lewis
Driver Signature

Shipment Date

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

Henry Lewis
Driver Signature

3-25-94
Delivery Date

DESTINATION

Site Name Springhill Regional Landfill
Address 4945 Highway 273 Graceville, FL 32440

Phone Number 904-263-7102

Disposal Locations: Cell 0 Grid 157 Level 2 Sample Information: Dry

I hereby acknowledge receipt of the above-described materials.

Tina Johnson
Name of Authorized (Print)

Sample Taken By LJ
Signature Tina Johnson
Receipt Date 3/26/94

DRIVER PLEASE SIGN HERE
SJ Vice

Springhill Landfill
P. O. Box 706
Cottontale, FL 32431-0000

Page: 01 of 01

0007447

ORIGINAL

2 4 0138

CHEM WASTE - HOUSTON

988 KMK 3:20PM 3:50PM 3/25/94

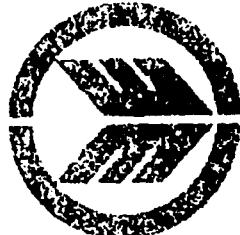
CHEM WASTE - HOUSTON
13TH FLOOR
100 BLENBOROUGH
HOUSTON, TX 77067-0000

GROSS POUNDS	:	71,000.00	IN-1
TARE POUNDS	:	28,140.00	OUT-1
		<hr/>	
NET POUNDS	:	42,860.00	

THANK YOU. DRIVE SAFE!!
FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 42,860.00

ORANGE



0-15T-2 100N 100E

868 -CONTAMINATED SOIL

21.43 TONS \$32.000 \$685.76

TOTAL AMOUNT

\$685.76

24 0139



A Waste Management Company

NON-HAZARDOUS MANIFEST
GENERATOR

Generator Chevron Chemical Co.
Address 6001 Bollinger Canyon Rd
San Ramon, CA 94583
Phone (510) 842-5883

I.D. # _____
Shipping Location 3100 N. Orange Blossom Trail
Address Orlando, FL 32804
Phone _____

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
Soil	WMNR 003470	21.73	TONS	SEMI TRAILER 21.43 T

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Allen Joe Allen Johnson

Generator Authorized Agent Name (Print)

Allen Joe

3-25-94

Signature

Delivery Date

TRANSPORTER

Transporter Name C & W TRANSPORT INC Driver Name (Print) JASUE OSCAR VELA
Address 317 ENTERPRISE ST Truck Number 980
OCEAN, FL 34761 Truck Type PETERBILT

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

Driver Signature

Shipment Date

Delivery Date

DESTINATION

Site Name SPRINGHILL REGIONAL LANDFILL Phone Number (904) 763-710
Address 4945 HIGHWAY 273 GRACEVILLE FL 32440

Disposal Locations: Cell 0 Grid 1ST Level 2 Sample Information: OK

I hereby acknowledge receipt of the above-described materials.

Karen Keith

Name of Authorized (Print)

Sample Taken By: KK

Karen Keith
Signature

Receipt Date



2 4 0141

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 2May 16, 1994
PACE Project Number: 240425583

Client Reference: CHEVRON ORLANDO

PACE Sample Number:	90 0430892		
Date Collected:	04/29/94		
Date Received:	05/03/94		
Client Sample ID:	CO-SS-EX4		
Parameter	Units	PRL	DATE ANALYZED

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	7.7	05/09/94
----------	---	------	-----	----------

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

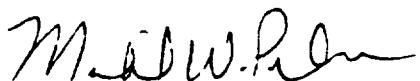
Date Extracted-Pesticides/PCBS				05/06/94
A-BHC	ug/kg	4	ND	05/12/94
S-BHC	ug/kg	4	ND	05/12/94
G-BHC	ug/kg	4	ND	05/12/94
D-BHC	ug/kg	4	ND	05/12/94
Heptachlor	ug/kg	8	ND	05/12/94
Aldrin	ug/kg	4	ND	05/12/94
Heptachlor Epoxide	ug/kg	4	ND	05/12/94
Endosulfan	ug/kg	20	ND	05/12/94
Dieldrin	ug/kg	4	ND	05/12/94
Endrin	ug/kg	8	ND	05/12/94
4,4-DDD	ug/kg	5	ND	05/12/94
Endosulfan II	ug/kg	20	ND	05/12/94
4,4-DDT	ug/kg	5	42	05/12/94
4,4-DDE	ug/kg	4	49	05/12/94
Endrin Aldehyde	ug/kg	33	ND	05/12/94
Endosulfan Sulfate	ug/kg	20	ND	05/12/94
Chlordane	ug/kg	8	540	05/12/94
Methoxychlor	ug/kg	10	ND	05/12/94
Toxaphene	ug/kg	83	ND	05/12/94
2,4,5,5-Tetrachloro-m-xylene (Surrogate)	%	0.1	79	05/12/94

Ms. Susan Tobin
Page 3

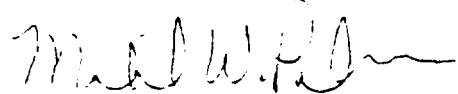
May 16, 1994
PACE Project Number: 240425583

Client Reference: CHEVRON ORLANDO

These data have been reviewed and are approved for release.



Michael F. Valder
Manager, Inorganic Chemistry



Michael W. Palmer
Manager, Organic Chemistry



2 4

0143

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 4FOOTNOTES
for pages 1 through 3May 16, 1994
PACE Project Number: 24042558

Client Reference: CHEVRON ORLANDO

ND Not detected at or above the PRL.
PRL PACE Reporting Limit



2 4

0144

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 5

QUALITY CONTROL DATA

May 16, 1994

PACE Project Number: 240425583

Client Reference: CHEVRON ORLANDO

Moisture

Batch: 90 51356
Samples: 90 0430884, 90 0430892

METHOD BLANK AND SAMPLE DUPLICATE.

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>	<u>Duplicate</u>	<u>of</u>	<u>RPL</u>
Moisture	%	0.01	Blank	900431171	90 0431171	2.1
			ND	2.1	2.1	0%

Ms. Susan Tobin
 Page 6

QUALITY CONTROL DATA

May 16, 1994
 PACE Project Number: 24042558C

Client Reference: CHEVRON ORLANDO

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 51411

Samples: 90 0430884, 90 0430892

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
A-BHC	ug/kg	4	ND
B-BHC	ug/kg	4	ND
G-BHC	ug/kg	4	ND
D-BHC	ug/kg	4	ND
Heptachlor	ug/kg	8	ND
Aldrin	ug/kg	4	ND
Heptachlor Epoxide	ug/kg	4	ND
Endosulfan	ug/kg	20	ND
Dieldrin	ug/kg	4	ND
Endrin	ug/kg	8	ND
4,4-DDD	ug/kg	5	ND
Endosulfan II	ug/kg	20	ND
4,4-DDT	ug/kg	5	ND
4,4-DDE	ug/kg	4	ND
Endrin Aldehyde	ug/kg	33	ND
Endosulfan Sulfate	ug/kg	20	ND
Chlordane	ug/kg	8	ND
Methoxychlor	ug/kg	10	ND
Toxaphene	ug/kg	83	ND
2,4,5,6-Tetrachloro-m-xylene (Surrogate %)		0.1	73

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900431171</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Dupl</u>	<u>Dupl Recv</u>	<u>RF</u>
G-BHC	ug/kg	8.0	ND					
G-BHC	ug/kg	4		8.3	78%	72%	8	
Heptachlor	ug/kg	16	ND					
Heptachlor	ug/kg	8		8.3	90%	76%	17	
Aldrin	ug/kg	8.0	ND					
Aldrin	ug/kg	4		8.3	87%	70%	22	
Dieldrin	ug/kg	8.0	ND					



2 4 0146

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 7

QUALITY CONTROL DATA

May 16, 1994
PACE Project Number: 240425583

Client Reference: CHEVRON ORLANDO

8080 ORGANOCHLORINE PESTICIDES
Batch: 90 51411
Samples: 90 0430884, 90 0430892

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	PRI	900431171	Spike	Spike Recv	Dupl Recv	RPT
Dieldrin	ug/kg	4		33	100%	97%	3%
Endrin	ug/kg	16	ND				
Endrin	ug/kg	8		33	191%	155%	21%
4,4-DDT	ug/kg	10	73				
1,4-DDT	ug/kg	5		33	79%	105%	29%

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	PRI	Reference Value	Dupl Recv	RPT
A-BHC	ug/kg	4	33	85%	82%
B-BHC	ug/kg	4	33	72%	79%
G-BHC	ug/kg	4	33	88%	85%
D-BHC	ug/kg	4	33	88%	88%
Heptachlor	ug/kg	8	33	91%	88%
Aldrin	ug/kg	4	33	91%	88%
Heptachlor Epoxide	ug/kg	4	33	100%	97%
Endosulfan	ug/kg	20	33	100%	100%
Dieldrin	ug/kg	4	33	67%	100%
Endrin	ug/kg	8	33	79%	26%
(2)					
4,4-DDD	ug/kg	5	33	103%	100%
Endosulfan II	ug/kg	20	33	97%	94%
4,4-DDT	ug/kg	5	33	106%	106%
4,4-DDE	ug/kg	4	33	97%	94%
Endrin Aldehyde	ug/kg	33	33	82%	82%
Endosulfan Sulfate	ug/kg	20	33	103%	103%

Sample results are reported on a dry weight basis.



2 4 0147

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 8

QUALITY CONTROL DATA

May 16, 1994
PACE Project Number: 24042558

Client Reference: CHEVRON ORLANDO

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 51411

Samples: 90 0430884, 90 0430892

All positive 608/8080/Arochlor results are confirmed by analysis on a secondary column unless noted.



2 4

0148

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 9FOOTNOTES
for pages 5 through 8May 16, 1994
PACE Project Number: 24042558

Client Reference: CHEVRON ORLANDO

- ND Not detected at or above the PRL.
PRL PACE Reporting Limit
RPD Relative Percent Difference
(1) Matrix interference.
(2) Duplicate injection results exceed control limits.

28
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COOLER NOS	BALERS	SHIPMENT METHOD		ITEM NUMBER	RELINQUISHED BY AFFILIATION	ACCEPTED BY AFFILIATION	DATE	TIME
		OUT DATE	RETURNED DATE					
		5/2/94			<i>John Marshall</i>	<i>Jackie Cordero</i>	5/2/94	15:30
Additional Comments								

SEE REVERSE SIDE FOR INSTRUCTIONS

BEST AVAILABLE COPY

2 4 0150

**ANALYSIS DATED MAY 16, 1994
ADDITIONAL CONFIRMATION SAMPLE RESULTS
FOR EXCAVATIONS 1 AND 4**



2 4 0151

REPORT OF LABORATORY ANALYSIS

May 15, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33605

RE: PACE Project No. 240425.563
Client Reference: CHEVRON ORLANDO

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received May 03, 1994.

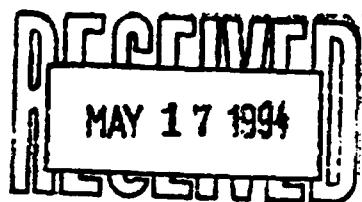
Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Chris Jock
Project Manager

Enclosures





2 4 0152

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

May 16, 1994
PACE Project Number: 24042558

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO

PACE Sample Number:	90 0430884		
Date Collected:	04/28/94		
Date Received:	05/03/94		
Client Sample ID:	CO-SS-EX1		
<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>COMP</u>

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	5.9	05/09/94
----------	---	------	-----	----------

ORGANIC ANALYSIS**6080 ORGANOCHLORINE PESTICIDES****Date Extracted-Pesticides/PCBS**

	ug/kg	4	ND	05/06/94
A-BHC	ug/kg	4	ND	05/12/94
B-BHC	ug/kg	4	ND	05/12/94
G-BHC	ug/kg	4	ND	05/12/94
D-BHC	ug/kg	4	ND	05/12/94
Heptachlor	ug/kg	8	ND	05/12/94
Aldrin	ug/kg	4	ND	05/12/94
Heptachlor Epoxide	ug/kg	4	ND	05/12/94
Endosulfan	ug/kg	20	ND	05/12/94
Dieldrin	ug/kg	4	11	05/12/94
Endrin	ug/kg	8	ND	05/12/94
4,4-DDD	ug/kg	5	ND	05/12/94
Endosulfan II	ug/kg	20	ND	05/12/94
4,4-DDT	ug/kg	5	5.0	05/12/94
4,4-DDE	ug/kg	4	ND	05/12/94
Endrin Aldehyde	ug/kg	33	ND	05/12/94
Endosulfan Sulfate	ug/kg	20	ND	05/12/94
Chlordane	ug/kg	8	150	05/12/94
Methoxychlor	ug/kg	10	ND	05/12/94
Toxaphene	ug/kg	33	ND	05/12/94
2,4,5,5-Tetrachloro-m-xylene (Surrogate)	%	0.1	78	05/12/94

24 0153

Printed on recycled paper

DRIVER: PLEASE SIGN HERE
D. J. Furr

Springhill Landfill
P.O. Box 706
Cottontale, FL 32431-0000

Page: 01 of 01

0007441

ORIGINAL

SHIPPING ADDRESS/NAME	TRUCK NUMBER	TRUCK OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	968	KMK	2:53PM	3:15PM	3/25/94

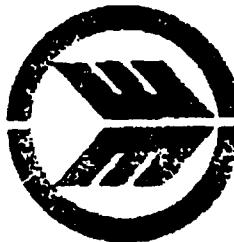
CHEM WASTE - HOUSTON
13TH FLOOR
100 GLENBOROUGH
HOUSTON, TX 77067-0000

GROSS POUNDS : 61,680.00IN-1
TARE POUNDS : 26,560.00OUT-1
NET POUNDS : 35,120.00

THANK YOU. DRIVE SAFE!!
FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 35,120.00

DISPOSAL SITES/SOURCES	OTHER INFORMATION
ORANGE	0-15T-2 100N 100E



MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	EST. RATE	AMOUNT
S68 -CONTAMINATED SOIL	17.56	TONS	\$32.000	\$561.92
TOTAL AMOUNT				\$561.92

24 0155

DRIVER: PLEASE SIGN HERE

Printed on recycled paper

Manuel Guerts

TICKET NO. 34

Springhill Landfill
 P.O. Box 706
 Cottontale, FL 32431-0000

Page: 01 of 01

0007479

ORIGINAL

HAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
CHEM WASTE - HOUSTON	175	TJ	7:07AM	8:04AM	3/26/94

CHEM WASTE - HOUSTON
 13TH FLOOR
 100 GLENBOROUGH
 HOUSTON, TX 77067-0000

GROSS POUNDS	:	81,540.00	IN-1
TARE POUNDS	:	29,240.00	OUT-
NET POUNDS	:	52,300.00	

THANK YOU. DRIVE SAFE!!
 FROM: SPRINGHILL REGIONAL LANDFILL

ADJUSTED POUNDS: 52,300.00

SOURCES	OTHER INFORMATION
ORANGE	CONTAMINATED SOIL 0-15T-2 100N 100E
	
<hr/>	
MATERIAL CODE/DESCRIPTION	QUANTITY/MEASURE
S68 -CONTAMINATED SOIL	26.15 TONS

Springhill Regional Landfill and Recycling Facility
4945 Highway 273
Graceville, FL 32440
(304) 243-2100



A Waste Management Company

2 4 0156

19 94

NON-HAZARDOUS MANIFEST GENERATOR

Generator Chevron Chemical Co.
Address 6001 Bollinger Canyon Rd.
San Bruno, CA 94583
Phone (510) 842-5883

I.D. #

Shipping Location 300 N. Orange Blossom Trail
Address Orlando, FL 32804
Phone Nine

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
<u>Soil</u>	<u>WMNA 203470</u>	<u>26.1</u>	<u>Tons</u>	<u>semi-trailer</u>
		<u>26.15</u>	<u>Ton</u>	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CFR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Patricia Krouse

Generator Authorized Agent Name (Print)

Patricia Krouse

3-25-94

Delivery Date

TRANSPORTER

Transporter Name C+H Transport Inc.
Address 317 Enterprise St.
Ocole, FL 34161

I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.

Manuel Fuentes

Driver Signature

3-25-94

Shipment Date

Driver Name (Print) Manuel Fuentes
Truck Number 175
Truck Type Freightline

I hereby acknowledge that the above-described materials were received from the generator site were transported without incident to the destination listed below.

Manuel Fuentes

3-25-94

Driver Signature

Delivery Date

DESTINATION

Site Name Springhill Regional Landfill Phone Number 904-263-7100
Address 4945 Highway 273 Graceville, FL 32440

Disposal Locations: Cell 0 Grid 15 T Level 2 Sample Information: Dry

I hereby acknowledge receipt of the above-described materials.

Tina Johnson

Name of Authorized (Print)

Sample Taken By: T. J.
Tina Johnson 3/25/94
Signature Receipt Date

Printed on recycled paper

~~DRIVER: PLEASE SIGN HERE~~

Springhill Landfill
P.O. Box 706
Cottontdale, FL 32431-0000

Page: 01 of 01

0007449

ORIGINAL

CHEM WASTE - HOUSTON					
	916	KMK	2:44PM	3:13PM	3/25/94
CHEM WASTE - HOUSTON 13TH FLOOR 100 GLENBOROUGH HOUSTON, TX 77067-0000			GROSS POUNDS	1	73,440.00IN-1
			TARE POUNDS	1	30,800.00OUT-
			NET POUNDS	1	42,640.00
THANK YOU. DRIVE SAFE!! FROM: SPRINGHILL REGIONAL LANDFILL			ADJUSTED POUNDS:		42,640.00

ORANGE



CONTAMINATED SOIL
0-15T-2 100N 100E

868 -CONTAMINATED SOIL

21.32 TONS \$32.000 \$682.24

TOTAL AMOUNT

ACT 9 : 4 4 : 04

2 4 0159

**ANALYSIS DATED APRIL 21, 1994
ANALYSIS OF BACKFILL IN LARGE EXCAVATION**

April 21, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240407.579
Client Reference: CHEVRON ORLANDO

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received April 07, 1994.

Footnotes are given at the end of the report.

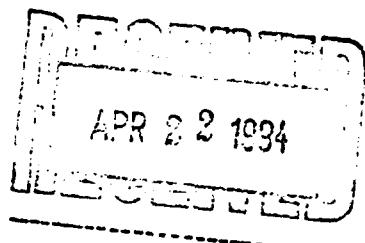
If you have any questions concerning this report, please feel free to contact us.

Sincerely,



Chris Jock
Project Manager

Enclosures





2 4

0161

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

April 21, 1994
PACE Project Number: 2404075

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO

PACE Sample Number:	90 0418159		
Date Collected:	04/06/94		
Date Received:	04/07/94		
Client Sample ID:	CO-BF-COM-		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>01</u> <u>DATE ANALYZED</u>

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	4.0	04/18/94
----------	---	------	-----	----------

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES****Date Extracted-Pesticides/PCBS**

A-BHC	ug/kg	4	ND	04/13/94
B-BHC	ug/kg	4	ND	04/15/94
G-BHC	ug/kg	4	ND	04/15/94
D-BHC	ug/kg	4	ND	04/15/94
Heptachlor	ug/kg	8	ND	04/15/94
Aldrin	ug/kg	4	ND	04/15/94
Heptachlor Epoxide	ug/kg	4	ND	04/15/94
Endosulfan	ug/kg	20	ND	04/15/94
Dieldrin	ug/kg	4	ND	04/15/94
Endrin	ug/kg	8	ND	04/15/94
4,4-DDD	ug/kg	5	ND	04/15/94
Endosulfan II	ug/kg	20	ND	04/15/94
4,4-DDT	ug/kg	5	ND	04/15/94
4,4-DDE	ug/kg	4	ND	04/15/94
Endrin Aldehyde	ug/kg	33	ND	04/15/94
Endosulfan Sulfate	ug/kg	20	ND	04/15/94
Chlordane	ug/kg	8	ND	04/15/94
Methoxychlor	ug/kg	10	ND	04/15/94
Toxaphene	ug/kg	83	ND	04/15/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	59	04/15/94



2 4 0162

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 2April 21, 1994
PACE Project Number: 24040757

Client Reference: CHEVRON ORLANDO

PACE Sample Number:		90 0418167		
Date Collected:		04/06/94		
Date Received:		04/07/94		
Client Sample ID:		CO-BF-COM-		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>02</u>	<u>DATE ANALYZED</u>

INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	5.2	04/18/94
----------	---	------	-----	----------

ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS

A-BHC	ug/kg	4	ND	04/13/94	04/15/94
B-BHC	ug/kg	4	ND	04/13/94	04/15/94
G-BHC	ug/kg	2	ND	04/13/94	04/15/94
D-BHC	ug/kg	2	ND	04/13/94	04/15/94
Heptachlor	ug/kg	8	ND	04/13/94	04/15/94
Aldrin	ug/kg	4	ND	04/13/94	04/15/94
Heptachlor Epoxide	ug/kg	4	ND	04/13/94	04/15/94
Endosulfan	ug/kg	20	ND	04/13/94	04/15/94
Dieldrin	ug/kg	4	5.5	04/13/94	04/15/94
Endrin	ug/kg	8	ND	04/13/94	04/15/94
4,4-DDD	ug/kg	5	5.9	04/13/94	04/15/94
Endosulfan II	ug/kg	20	ND	04/13/94	04/15/94
4,4-DDT	ug/kg	5	6.9	04/13/94	04/15/94
4,4-DDE	ug/kg	4	ND	04/13/94	04/15/94
Endrin Aldehyde	ug/kg	33	ND	04/13/94	04/15/94
Endosulfan Sulfate	ug/kg	20	ND	04/13/94	04/15/94
Chlordane	ug/kg	8	140	04/13/94	04/15/94
Methoxychlor	ug/kg	10	ND	04/13/94	04/15/94
Toxaphene	ug/kg	83	ND	04/13/94	04/15/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	68	04/13/94	04/15/94



2 4 0163

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 3April 21, 1994
PACE Project Number: 24040757

Client Reference: CHEVRON ORLANDO

PACE Sample Number:	90 0418175		
Date Collected:	04/06/94		
Date Received:	04/07/94		
Client Sample ID:	CO-BF-COM-		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>03</u> <u>DATE ANALYZED</u>

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	3.3	04/18/94
----------	---	------	-----	----------

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 04/13/94

A-BHC	ug/kg	4	ND	04/15/94
B-BHC	ug/kg	4	ND	04/15/94
G-BHC	ug/kg	4	ND	04/15/94
D-BHC	ug/kg	4	ND	04/15/94
Heptachlor	ug/kg	8	ND	04/15/94
Aldrin	ug/kg	4	ND	04/15/94
Heptachlor Epoxide	ug/kg	4	ND	04/15/94
Endosulfan	ug/kg	20	ND	04/15/94
Dieldrin	ug/kg	4	ND	04/15/94
Endrin	ug/kg	8	ND	04/15/94
4,4-DDD	ug/kg	5	ND	04/15/94
Endosulfan II	ug/kg	20	ND	04/15/94
4,4-DDT	ug/kg	5	ND	04/15/94
4,4-DDE	ug/kg	4	ND	04/15/94
Endrin Aldehyde	ug/kg	33	ND	04/15/94
Endosulfan Sulfate	ug/kg	20	ND	04/15/94
Chlordane	ug/kg	8	ND	04/15/94
Methoxychlor	ug/kg	10	ND	04/15/94
Toxaphene	ug/kg	83	ND	04/15/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	69	04/15/94



2 4 0164

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 4April 21, 1994
PACE Project Number: 24040757

Client Reference: CHEVRON ORLANDO

PACE Sample Number:		90 0418183		
Date Collected:		04/06/94		
Date Received:		04/07/94		
Client Sample ID:		CO-BF-COM-		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>04</u>	<u>DATE ANALYZED</u>

INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	3.3	04/18/94
----------	---	------	-----	----------

ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS				
A-BHC	ug/kg	4	ND	04/15/94
B-BHC	ug/kg	4	ND	04/15/94
G-BHC	ug/kg	4	ND	04/15/94
D-BHC	ug/kg	4	ND	04/15/94
Heptachlor	ug/kg	8	ND	04/15/94
Aldrin	ug/kg	4	ND	04/15/94
Heptachlor Epoxide	ug/kg	4	ND	04/15/94
Endosulfan	ug/kg	20	ND	04/15/94
Dieldrin	ug/kg	4	ND	04/15/94
Endrin	ug/kg	8	ND	04/15/94
4,4-DDD	ug/kg	5	ND	04/15/94
Endosulfan II	ug/kg	20	ND	04/15/94
4,4-DDT	ug/kg	5	ND	04/15/94
4,4-DDE	ug/kg	4	ND	04/15/94
Endrin Aldehyde	ug/kg	33	ND	04/15/94
Endosulfan Sulfate	ug/kg	20	ND	04/15/94
Chlordane	ug/kg	8	ND	04/15/94
Methoxychlor	ug/kg	10	ND	04/15/94
Toxaphene	ug/kg	83	ND	04/15/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	72	04/15/94

Ms. Susan Tobin
Page 5

April 21, 1994
PACE Project Number: 2404075

Client Reference: CHEVRON ORLANDO

These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic Chemistry

Michael W. Palmer
Manager, Organic Chemistry



2 4 0166

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 6FOOTNOTES
for pages 1 through 5April 21, 1994
PACE Project Number: 24040757

Client Reference: CHEVRON ORLANDO

ND Not detected at or above the PRL.
PRL PACE Reporting Limit



2 4 0167

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 7

QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24040757

Client Reference: CHEVRON ORLANDO

Moisture

Batch: 90 50862

Samples: 90 0418159, 90 0418167, 90 0418175, 90 0418183

METHOD BLANK AND SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>	900418159	Duplicate
Moisture	%	0.01	CO-BF-COM-	01	of
		ND	Blank	90 0418159	RE
				4.0	4.2



2 4 0168

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 8

QUALITY CONTROL DATA

April 21, 1994
PACE Project Number: 2404075

Client Reference: CHEVRON ORLANDO

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50931

Samples: 90 0418159, 90 0418167, 90 0418175, 90 0418183

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
A-BHC	ug/kg	4	ND
B-BHC	ug/kg	4	ND
G-BHC	ug/kg	4	ND
D-BHC	ug/kg	4	ND
Heptachlor	ug/kg	5	ND
Aldrin	ug/kg	4	ND
Heptachlor Epoxide	ug/kg	4	ND
Endosulfan	ug/kg	20	ND
Dieldrin	ug/kg	4	ND
Endrin	ug/kg	8	ND
4,4-DDD	ug/kg	5	ND
Endosulfan II	ug/kg	20	ND
4,4-DDT	ug/kg	5	ND
4,4-DDE	ug/kg	4	ND
Endrin Aldehyde	ug/kg	33	ND
Endosulfan Sulfate	ug/kg	20	ND
Chlordane	ug/kg	8	ND
Methoxychlor	ug/kg	10	ND
Toxaphene	ug/kg	83	ND
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	59

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	900418159	CO-BF-COM-	Spike	Dupl	RF
			01	Spike	Recy	Recy	Recy
G-BHC	ug/kg	4	ND	8.3	82%	52%	49
Heptachlor	ug/kg	8	ND	8.3	73%	43%	52
Aldrin	ug/kg	4	ND	8.3	105%	51%	70
Dieldrin	ug/kg	4	ND	33	85%	57%	24
Endrin	ug/kg	8	ND	33	91%	73%	21
4,4-DDT	ug/kg	5	ND	33	97%	91%	1



2 4 0169

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 9

QUALITY CONTROL DATA

April 21, 1994

PACE Project Number: 24040757

Client Reference: CHEVRON ORLANDO

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50931

Samples: 90 0418159, 90 0418167, 90 0418175, 90 0418183

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	Dupl Recy	Recy	RPI
A-BHC	ug/kg	4	33	45%	64%	35
B-BHC	ug/kg	4	33	52%	79%	41
G-BHC	ug/kg	4	33	48%	70%	37
D-BHC	ug/kg	4	33	55%	91%	40
Heptachlor	ug/kg	8	33	42%	67%	46
Aldrin	ug/kg	4	33	48%	67%	31
Heptachlor Epoxide	ug/kg	4	33	52%	85%	48
Endosulfan	ug/kg	20	33	52%	94%	58
Dieldrin	ug/kg	4	33	55%	103%	61
Endrin	ug/kg	8	33	67%	97%	37
4,4-DDD	ug/kg	5	33	67%	109%	48
Endosulfan II	ug/kg	20	33	55%	88%	40
4,4-DDT	ug/kg	5	33	48%	103%	71
4,4-DDE	ug/kg	4	33	61%	100%	48
Endrin Aldehyde	ug/kg	33	33	48%	88%	59
Endosulfan Sulfate	ug/kg	20	33	85%	73%	15
2,4,5,6-Tetrachloro m-xylene - surrogat	ug/kg	0.1	100	57%	107%	61

Sample results are reported on a dry weight basis.

All positive 608/8080/Arochlor results are confirmed by analysis on a secondary column unless noted.



240170

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 10FOOTNOTES
for pages 7 through 9April 21, 1994
PACE Project Number: 2404075

Client Reference: CHEVRON ORLANDO

ND Not detected at or above the PRL.
PRL PACE Reporting Limit
RPD Relative Percent Difference

16785

CHAIN-OF-CUSTODY RECORD
Analytical Request

nt TASK Environmental
ress 710 S Howard Ave
Tampa FL 33606
ne 254 8838

plied By (PRINT):

PKrause

Player Signature: PKrause

Date Sampled 4/6/94

Report To: Susan Tobin

Bill To:

P.O. # / Billing Reference

Project Name / No. Chevron Orlando

Pace Client No.

Pace Project Manager

Pace Project No. 240407579

*Requested Due Date:

Post mark

2
4

EM D	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO	NO. OF CONTAINERS	PRESERVATIVES				ANALYSES REQUEST <i>8050</i>	REMARKS
						UNPRESERVED	H ₂ SO ₄	HNO ₃	VOA		
1	CO-BF-COM-01	1110	800		1	X				X	41815.9
2	CO-BF-COM-02	1115	800		1	X				X	41816.7
3	CO-BF-COM-03	1117	800		1	X				X	41817.5
4	CO-BF-COM-04	1120	800		1	X				X	41818.3
5											
6											
7											
8											
ITEM	PALETT	SHIPMENT OUT DATE	METHOD RETURNED DATE	ITEM NUMBER	RELINQUISHED BY AFFILIATION	A. EPTED BY AFFILIATION	DATE	TIME			
/					<i>PKrause TASK</i>	<i>off Banks Pace</i>	<i>4/7/94</i>	<i>1413</i>			

ditional Comments

SEE REVERSE SIDE FOR INSTRUCTIONS

2 4 0172

APPENDIX C
CONFIRMATION SAMPLE ANALYTICAL RESULTS

2 4 0173

**ANALYSIS DATED APRIL 20, 1994
ANALYTICAL REPORTS FOR
VER - VERIFICATION SAMPLE SPLITS
AND EXCOM - EXCAVATION CONFIRMATION SAMPLES**

April 20, 1994

Ms. Susan Tobin
TASK Environmental
710 So. Howard Avenue
Tampa, FL 33606

RE: PACE Project No.240214.585, Chevron Orlando / EQ0026

Dear Ms. Tobin:

Attached is a reissued report of the above project that was recently completed. A correction of the chlordane result for PACE Sample No. 900411529 (TASK Sample Description CO-EXCOM 3-A) has been made. The chlordane result on this report dated April 14, 1994 was originally at 9900 ug/kg. The chlordane result is now reported as 3100 ug/kg for this sample. The change was made as a result of a calculation factor being omitted in the original result concentration calculation. The appropriate factor was applied and resulted in the aforementioned result change. As a consequence, the other sample results were reexamined to verify the reported values. There are no additional result changes required based on this review.

Additionally, you requested a review and comparison of the chromatographic peak patterns for CO-EXCOM 4-A and 4-B samples to those of some of the CO-5COM samples. (The chromatograms for CO-5COM 1-4, 6 and 7 samples were chosen for the comparison.) There are no distinguishing peak patterns that would suggest different mixtures (or possible sources) of chlordane are present. Conversely, the peak patterns look quite similar. However, caution must be used when trying to make any conclusion for or against the possibilities of different sources of chlordane contributing to the total concentration of this pesticide at the sampled sites. Further analytical work would be necessary to determine this. The extent of which is not known at this time. (I have included copies of the applicable chromatograms used for the review and comparison.)

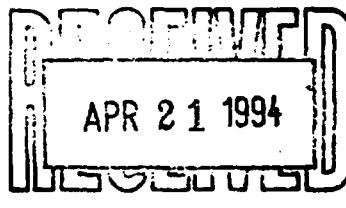
Should you have any further questions or want additional review of the chromatograms don't hesitate to call me directly. It is my pleasure to be of continued service to you and your company.

Sincerely,

Christopher P. Jock
Regional Director
PACE, Inc. - Florida Region

Enclosures: Analytical Report (reissued)
Chromatograms

WPPSS:321



24 0175

PACE Inc TAMPA Semivolatile GC-2

LONG PLOT

Injection C: <DEFP00J> 1 04/12/EST, 7,1

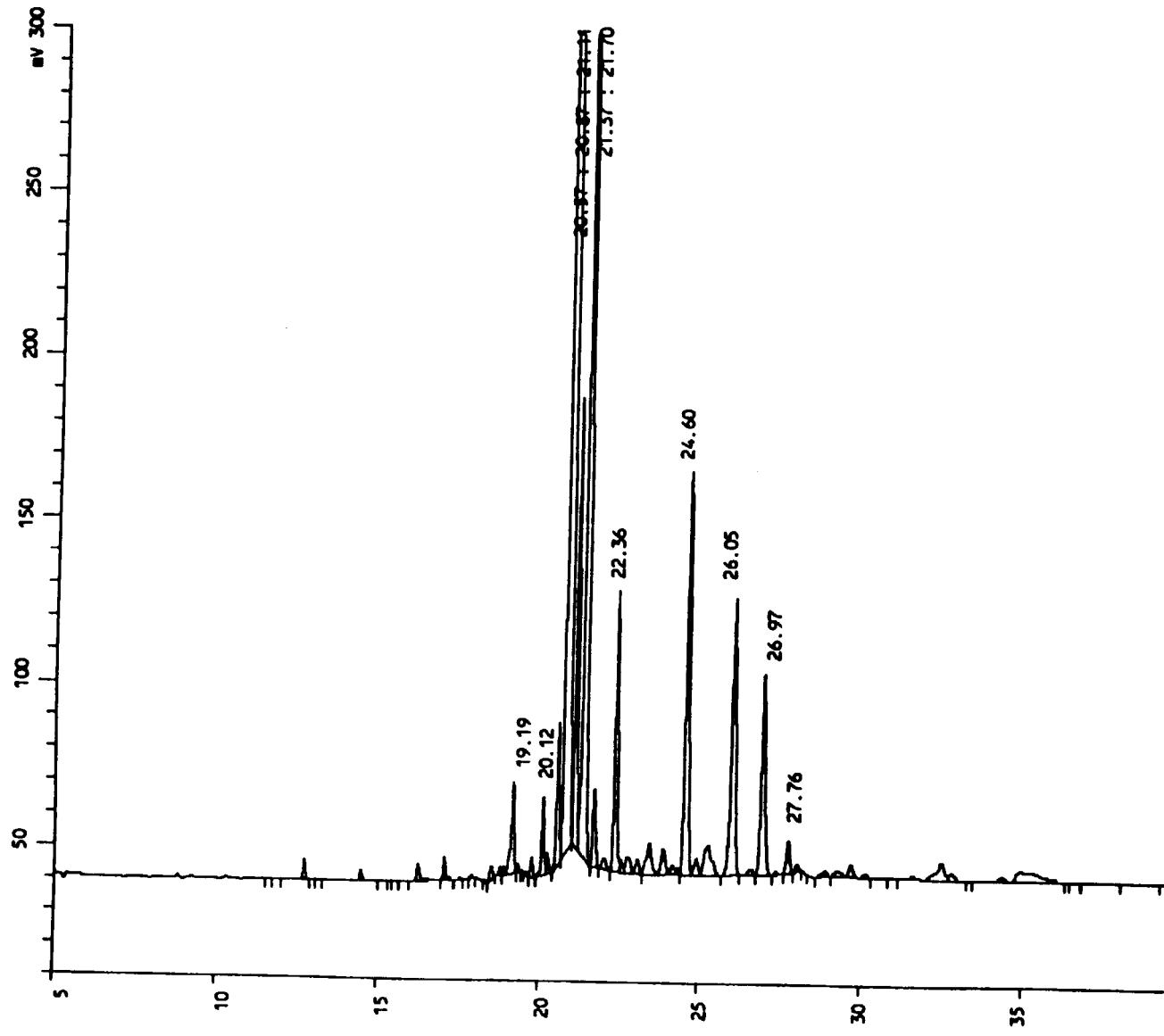
Sample name.....: 41154-1:20
Sample ID.....: 41154-1:20
GC-2 EPA Method 608 / 8080 ANALYST: JCS

Acquired on 12-Apr-94 at 18:44:03

Reported on 13-Apr-94 at 08:38:47

CO - FLOWDOWN

4-A



2 4 0176

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFPROM> 1 0412PEST,8,1

CO-EXCOM

Sample name.....: 41155 1:20

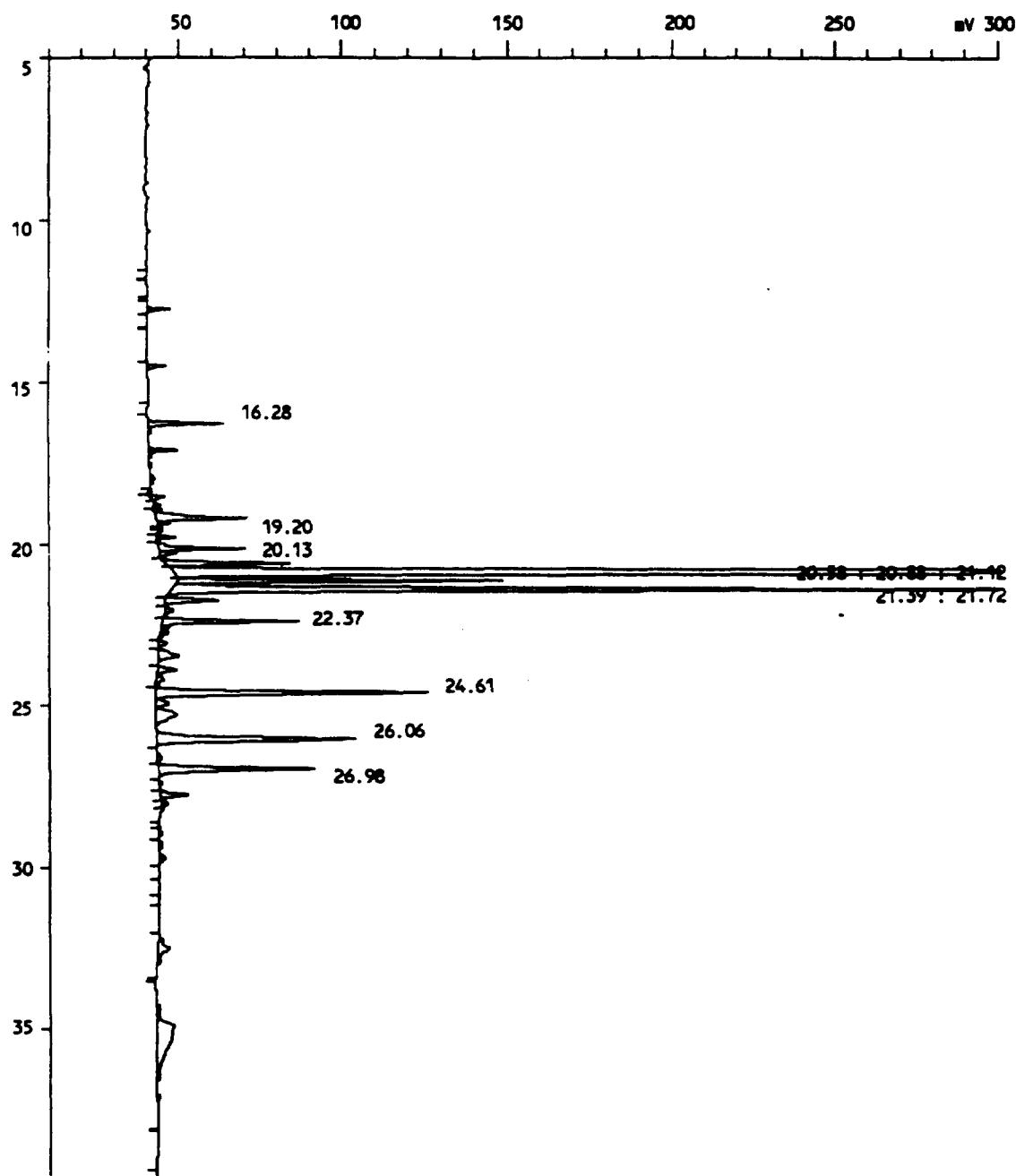
4-B

Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 12-Apr-94 at 19:49:04

Reported on 13-Apr-94 at 08:39:48



2 4 0177

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFPProj> 1 0412PEST,9,1

Co-SC^{OM}

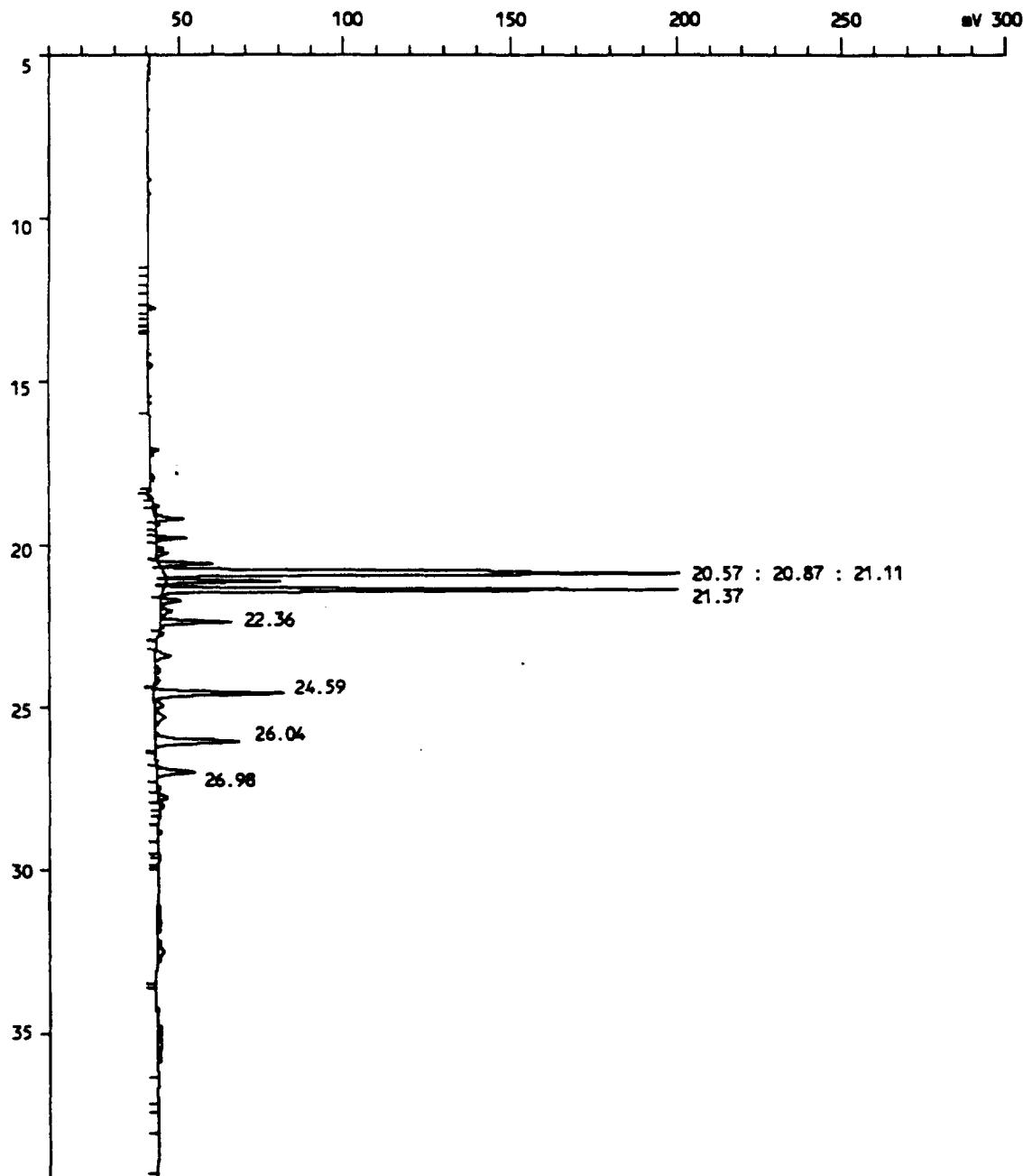
Sample name.....: 41156 1:50

Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 12-Apr-94 at 20:54:04

Reported on 13-Apr-94 at 08:40:45



2 4 0178

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFPProj> 1 0412PEST,12,1

(O)-50M
2

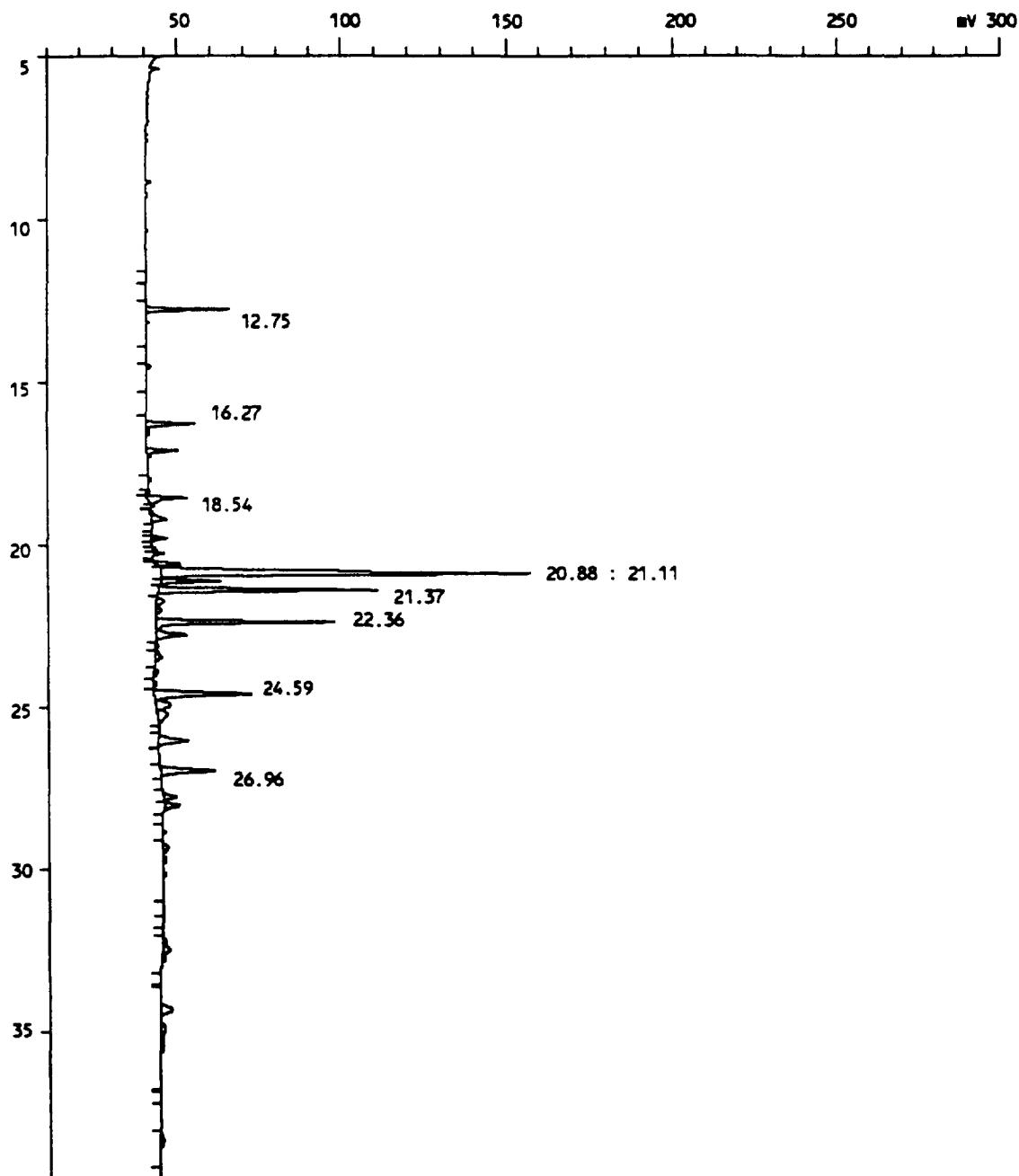
Sample name.....: 41157 1:5

Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 13-Apr-94 at 00:09:01

Reported on 13-Apr-94 at 08:43:44



2 4 0179

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFFPROJ> 1 0412PEST,11,1

*CO₂ SCAN
3*

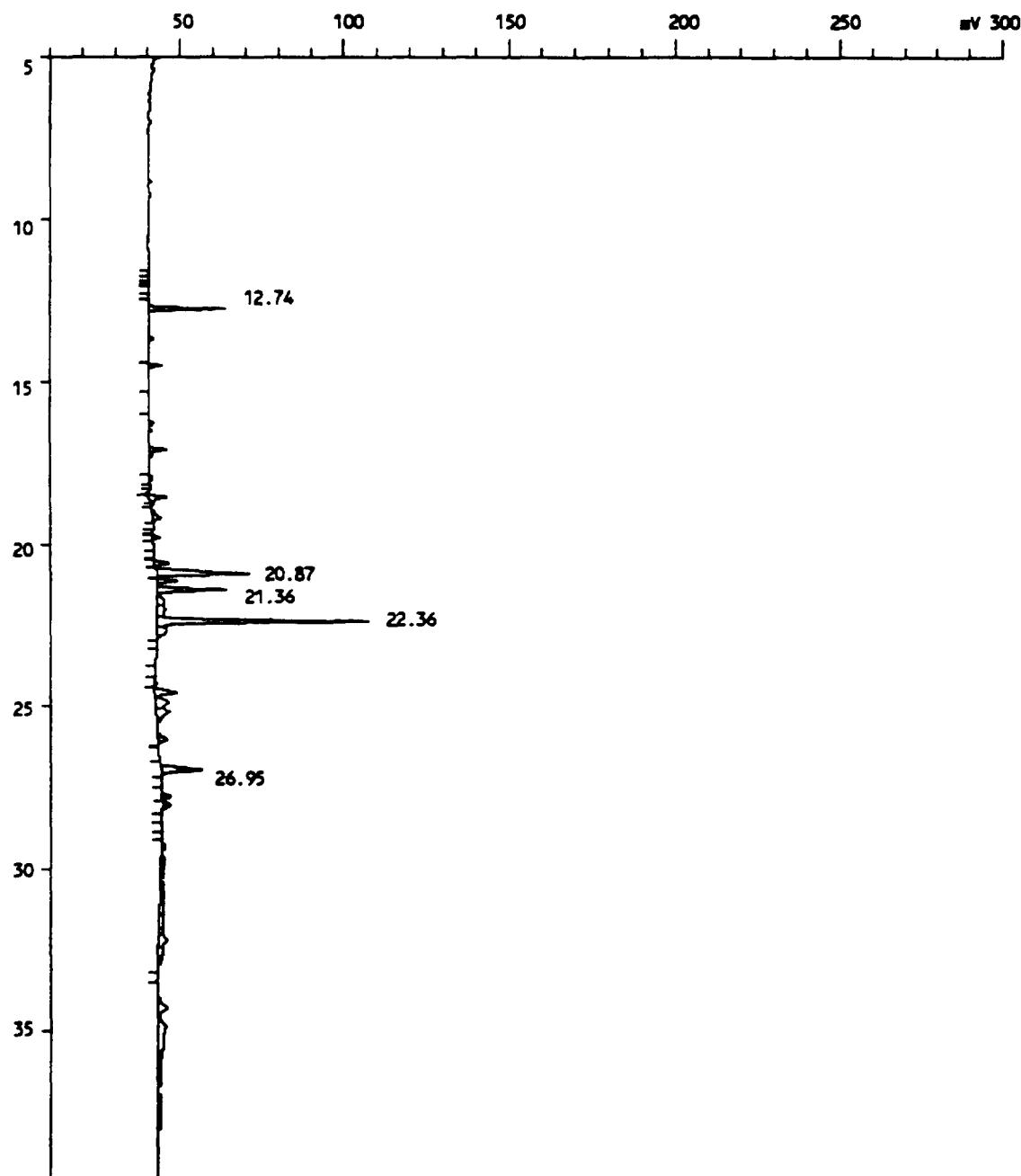
Sample name.....: 41158 1:5

Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 12-Apr-94 at 23:04:01

Reported on 13-Apr-94 at 08:42:44



2 4 0180

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFPProj> 1 0412PEST,6,1

Sample name.....: 41159 1:10

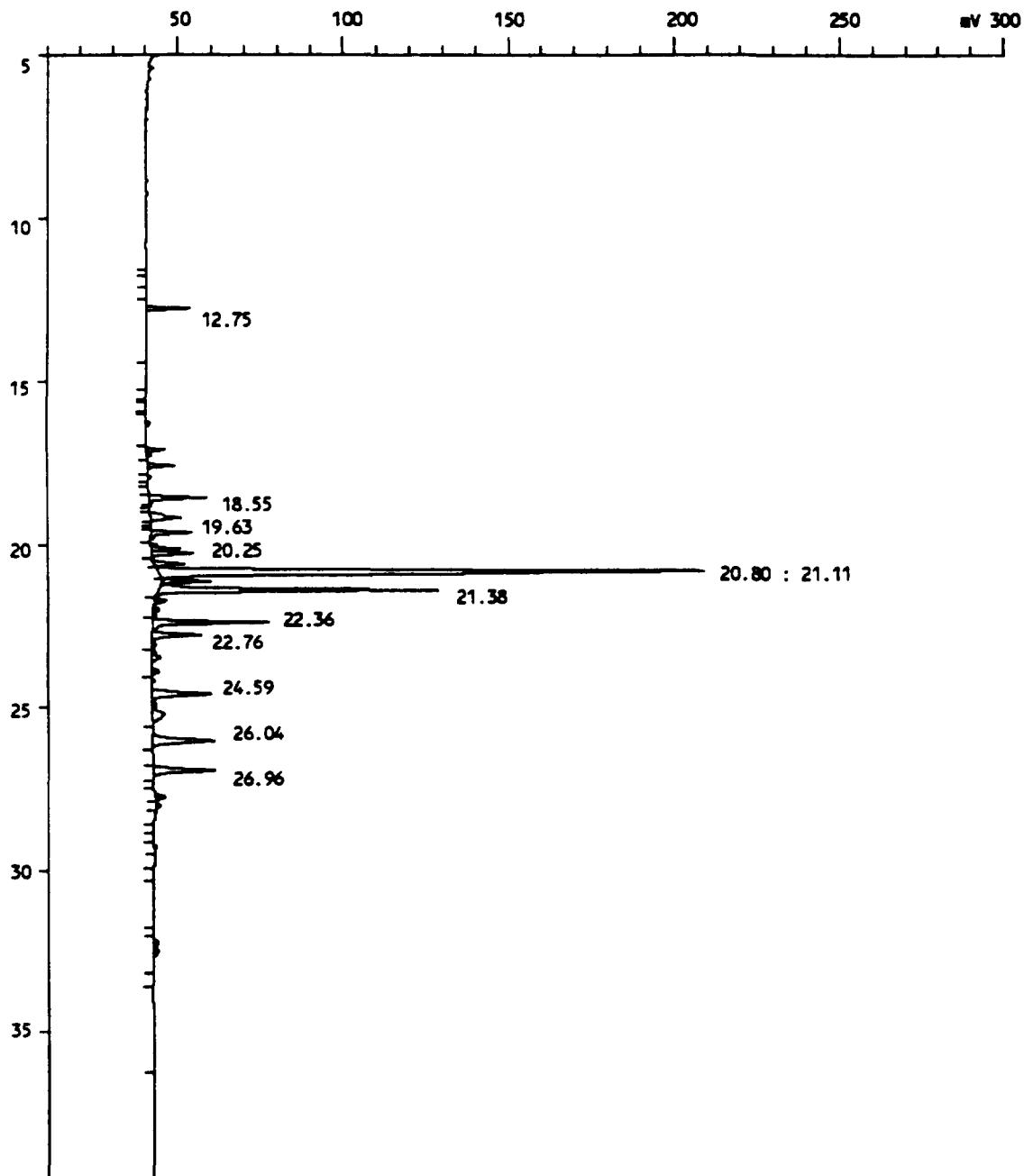
Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 12-Apr-94 at 17:38:39

Reported on 13-Apr-94 at 08:37:47

CO-SOM
4



2 4 0181

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFFPROJ> 1 0412PEST, 13,1

CO-SK6M
6

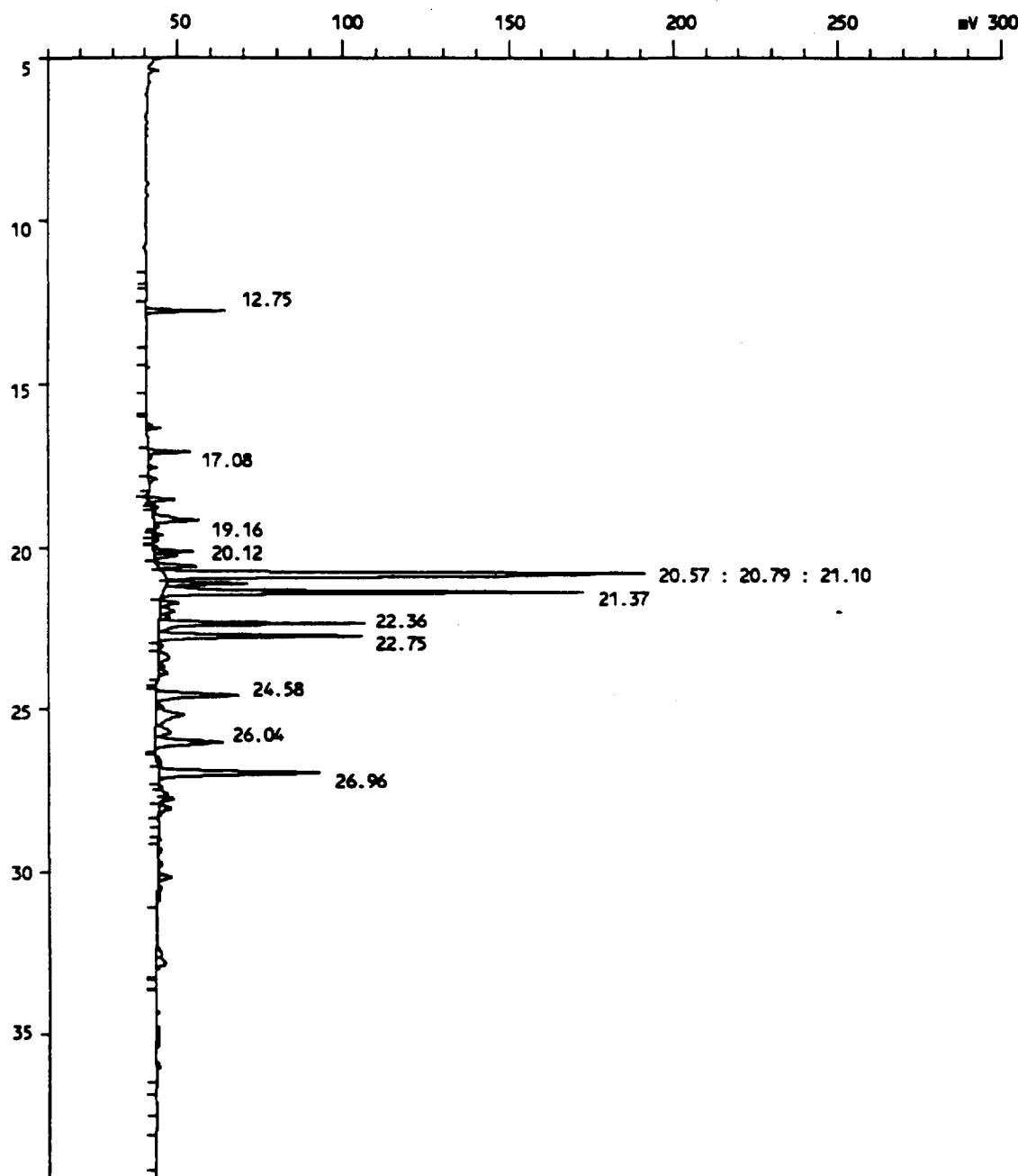
Sample name.....: 41161 1:5

Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 13-Apr-94 at 01:13:54

Reported on 13-Apr-94 at 08:44:42



2 4 0182

PACE Inc TAMPA Semivolatiles GC-2

LONG PLOT

Injection C: <DEFFPROJ> 1 0411PEST,7,1

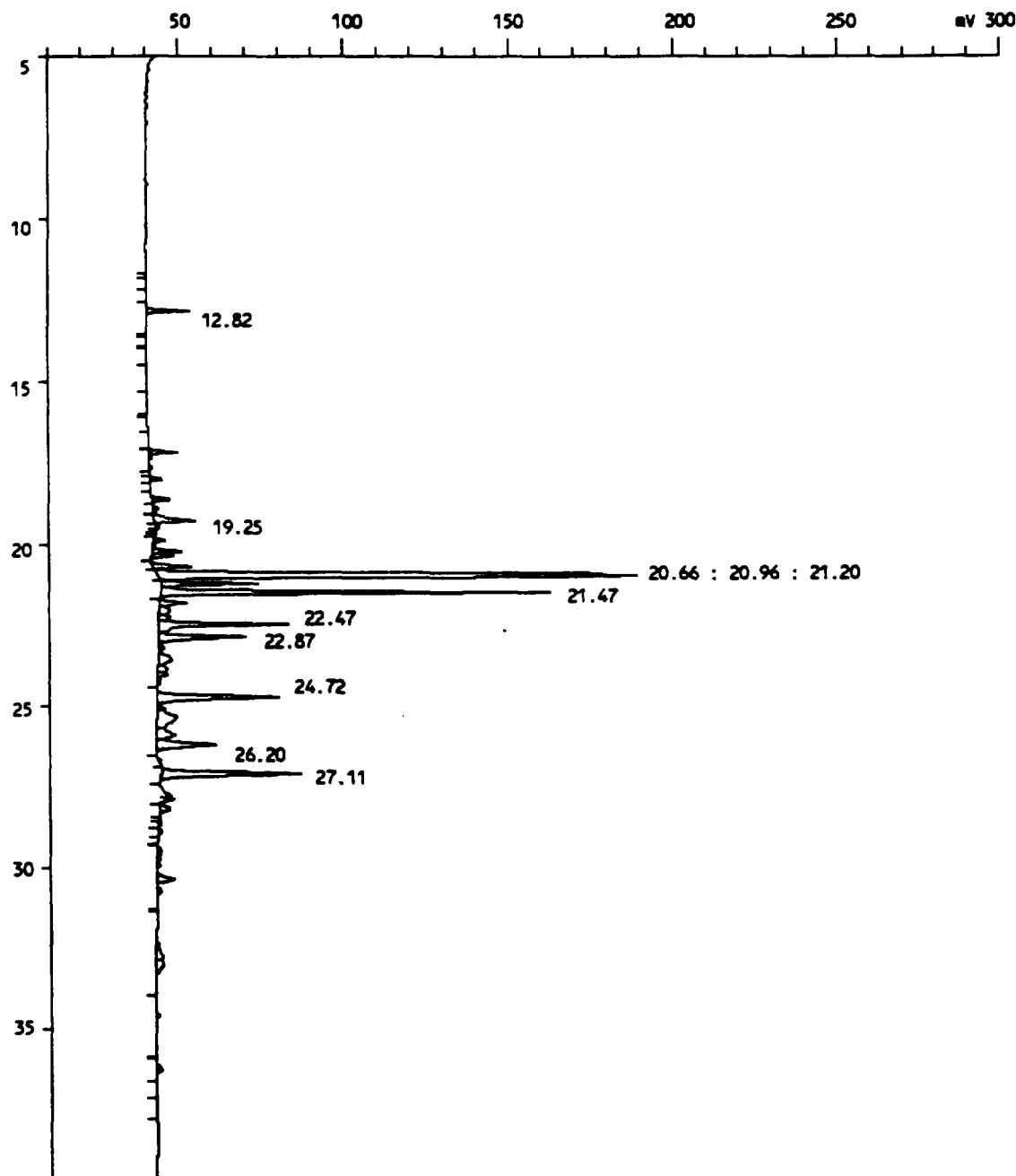
Sample name.....: 41162 1:10

Sample ID.....:

GC-2 EPA Method 608 / 8080 ANALYST:JKS

Acquired on 11-Apr-94 at 16:21:08

Reported on 12-Apr-94 at 09:15:22

CO-SC^oM
X



2 4 0183

REPORT OF LABORATORY ANALYSIS

April 18, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240214.585
Client Reference: CHEVRON ORLANDO / E00026

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received March 28, 1994.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Chris Jock
Project Manager

Enclosures



2 4

0184

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

April 18, 1994
PACE Project Number: 2402145E

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411448
Date Collected: 03/21/94
Date Received: 03/28/94
Client Sample ID: CO-SS
VER-1

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2156</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	41	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
--------------------------------	--	----------	--

A-BHC	ug/kg	3400	ND	04/12/94
B-BHC	ug/kg	3400	ND	04/12/94
G-BHC	ug/kg	3400	ND	04/12/94
D-BHC	ug/kg	3400	ND	04/12/94
Heptachlor	ug/kg	6800	ND	04/12/94
Aldrin	ug/kg	3400	ND	04/12/94
Heptachlor Epoxide	ug/kg	3400	ND	04/12/94
Endosulfan	ug/kg	17000	ND (1)	04/12/94
Dieldrin	ug/kg	3400	ND	04/12/94
Endrin	ug/kg	6800	ND	04/12/94
4,4-DDD	ug/kg	4200	3800	04/12/94
Endosulfan II	ug/kg	17000	ND	04/12/94
4,4-DDT	ug/kg	4200	15000	04/12/94
4,4-DDE	ug/kg	3400	4200	04/12/94
Endrin Aldehyde	ug/kg	28000	ND	04/12/94
Endosulfan Sulfate	ug/kg	17000	ND	04/12/94
Chlordane	ug/kg	6800	340000 (2)	04/12/94
Methoxychlor	ug/kg	8500	ND	04/12/94
Toxaphene	ug/kg	70000	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	85	ND (3)	04/12/94



2 4 0185

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 2April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411456
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-SS
VER-12

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2158	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	30	04/01/94
----------	---	------	----	----------

ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	56	ND	04/11/94
B-BHC	ug/kg	56	ND	04/11/94
G-BHC	ug/kg	56	ND	04/11/94
D-BHC	ug/kg	56	ND	04/11/94
Heptachlor	ug/kg	110	ND	04/11/94
Aldrin	ug/kg	56	ND	04/11/94
Heptachlor Epoxide	ug/kg	56	ND	04/11/94
Endosulfan	ug/kg	280	ND	04/11/94
Dieldrin	ug/kg	56	ND	04/11/94
Endrin	ug/kg	110	ND	04/11/94
4,4-DDD	ug/kg	70	ND	04/11/94
Endosulfan II	ug/kg	280	ND	04/11/94
4,4-DDT	ug/kg	70	150	04/11/94
4,4-DDE	ug/kg	56	100	04/11/94
Endrin Aldehyde	ug/kg	460	ND	04/11/94
Endosulfan Sulfate	ug/kg	280	ND	04/11/94
Chlordane	ug/kg	110	3600 (2)	04/11/94
Methoxychlor	ug/kg	140	ND	04/11/94
Toxaphene	ug/kg	1200	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	1.4	36	04/11/94



2 4

0186

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 3

April 18, 1994

PACE Project Number: 2402145E

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411464
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-SS
VER-18

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2159	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	5.2	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	420	ND	04/11/94
B-BHC	ug/kg	420	ND	04/11/94
G-BHC	ug/kg	420	ND	04/11/94
D-BHC	ug/kg	420	ND	04/11/94
Heptachlor	ug/kg	340	ND	04/11/94
Aldrin	ug/kg	420	ND	04/11/94
Heptachlor Epoxide	ug/kg	420	ND	04/11/94
Endosulfan	ug/kg	2100	ND	04/11/94
Dieldrin	ug/kg	420	ND	04/11/94
Endrin	ug/kg	840	ND	04/11/94
4,4-DDD	ug/kg	520	ND	04/11/94
Endosulfan II	ug/kg	2100	ND	04/11/94
4,4-DDT	ug/kg	520	ND	04/11/94
4,4-DDE	ug/kg	420	ND	04/11/94
Endrin Aldehyde	ug/kg	3500	ND	04/11/94
Endosulfan Sulfate	ug/kg	2100	ND	04/11/94
Chlordane	ug/kg	840	22000 (2)	04/11/94
Methoxychlor	ug/kg	1000	ND	04/11/94
Toxaphene	ug/kg	8700	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	10	ND (3)	04/11/94



2 4 0187

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 4April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411472
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-SS
VER-11

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2157	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	0.97	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	400	ND	04/11/94
B-BHC	ug/kg	400	ND	04/11/94
G-BHC	ug/kg	400	ND	04/11/94
D-BHC	ug/kg	400	ND	04/11/94
Heptachlor	ug/kg	810	ND	04/11/94
Aldrin	ug/kg	400	ND	04/11/94
Heptachlor Epoxide	ug/kg	400	ND	04/11/94
Endosulfan	ug/kg	2000	ND	04/11/94
Dieldrin	ug/kg	400	ND	04/11/94
Endrin	ug/kg	810	ND	04/11/94
4,4-DDD	ug/kg	500	ND	04/11/94
Endosulfan II	ug/kg	2000	ND	04/11/94
4,4-DDT	ug/kg	500	ND	04/11/94
4,4-DDE	ug/kg	400	ND	04/11/94
Endrin Aldehyde	ug/kg	3300	ND	04/11/94
Endosulfan Sulfate	ug/kg	2000	ND	04/11/94
Chlordane	ug/kg	810	16000 (2)	04/11/94
Methoxychlor	ug/kg	1000	ND	04/11/94
Toxaphene	ug/kg	8400	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	10	ND (3)	04/11/94



2 4 0188

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 5April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411480
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
I-A

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	5.0	04/01/94
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ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	21	ND	04/13/94
B-BHC	ug/kg	21	ND	04/13/94
G-BHC	ug/kg	21	ND	04/13/94
D-BHC	ug/kg	21	ND	04/13/94
Heptachlor	ug/kg	42	ND	04/13/94
Aldrin	ug/kg	21	ND	04/13/94
Heptachlor Epoxide	ug/kg	21	ND	04/13/94
Endosulfan	ug/kg	110	ND (1)	04/13/94
Dieldrin	ug/kg	21	53	04/13/94
Endrin	ug/kg	42	ND	04/13/94
4,4-DDD	ug/kg	26	ND	04/13/94
Endosulfan II	ug/kg	110	ND	04/13/94
4,4-DDT	ug/kg	26	54	04/13/94
4,4-DDE	ug/kg	21	29	04/13/94
Endrin Aldehyde	ug/kg	170	ND	04/13/94
Endosulfan Sulfate	ug/kg	110	ND	04/13/94
Chlordane	ug/kg	42	1600 (2)	04/13/94
Methoxychlor	ug/kg	53	ND	04/13/94
Toxaphene	ug/kg	440	ND	04/13/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.53	82	04/13/94



2 4 0189

REPORT OF LABORATORY ANALYSIS-- Ms. Susan Tobin
Page 6April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411499
Date Collected: 03/24/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
1-B

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2151	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	4.0	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS	03/31/94
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A-BHC	ug/kg	83	ND	04/11/94
B-BHC	ug/kg	83	ND	04/11/94
G-BHC	ug/kg	83	ND	04/11/94
D-BHC	ug/kg	83	ND	04/11/94
Heptachlor	ug/kg	170	ND	04/11/94
Aldrin	ug/kg	83	ND	04/11/94
Heptachlor Epoxide	ug/kg	83	ND	04/11/94
Endosulfan	ug/kg	420	ND	04/11/94
Dieldrin	ug/kg	83	94	04/11/94
Endrin	ug/kg	170	ND	04/11/94
4,4-DDD	ug/kg	100	ND	04/11/94
Endosulfan II	ug/kg	420	ND	04/11/94
4,4-DDT	ug/kg	100	ND	04/11/94
4,4-DDE	ug/kg	83	ND	04/11/94
Endrin Aldehyde	ug/kg	690	ND	04/11/94
Endosulfan Sulfate	ug/kg	420	ND	04/11/94
Chlordane	ug/kg	170	6700 (2)	04/11/94
Methoxychlor	ug/kg	210	ND	04/11/94
Toxaphene	ug/kg	1700	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	2.1	81	04/11/94



2 4

0190

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 7April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411502
Date Collected: 03/24/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
2-B

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2153</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	24	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS	03/31/94
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A-BHC	ug/kg	5.3	ND	04/11/94
B-BHC	ug/kg	5.3	ND	04/11/94
G-BHC	ug/kg	5.3	ND	04/11/94
D-BHC	ug/kg	5.3	ND	04/11/94
Heptachlor	ug/kg	11	ND	04/11/94
Aldrin	ug/kg	5.3	ND	04/11/94
Heptachlor Epoxide	ug/kg	5.3	ND	04/11/94
Endosulfan	ug/kg	26	ND	04/11/94
Dieldrin	ug/kg	5.3	ND	04/11/94
Endrin	ug/kg	11	ND	04/11/94
4,4-DDD	ug/kg	6.6	ND	04/11/94
Endosulfan II	ug/kg	26	ND	04/11/94
4,4-DDT	ug/kg	6.6	9.9	04/11/94
4,4-DDE	ug/kg	5.3	14	04/11/94
Endrin Aldehyde	ug/kg	44	ND	04/11/94
Endosulfan Sulfate	ug/kg	26	ND	04/11/94
Chlordane	ug/kg	11	84	04/11/94
Methoxychlor	ug/kg	13	86	04/11/94
Toxaphene	ug/kg	110	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.13	75	04/11/94



2 4 0191

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 8April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411510
Date Collected: 03/24/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
2-A

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>DATE ANALYZED</u>
		2152	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	2.4	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	4.1	ND	04/11/94
B-BHC	ug/kg	4.1	ND	04/11/94
G-BHC	ug/kg	4.1	ND	04/11/94
D-BHC	ug/kg	4.1	ND	04/11/94
Heptachlor	ug/kg	6.2	ND	04/11/94
Aldrin	ug/kg	4.1	ND	04/11/94
Heptachlor Epoxide	ug/kg	4.1	ND	04/11/94
Endosulfan	ug/kg	20	ND	04/11/94
Dieldrin	ug/kg	4.1	ND	04/11/94
Endrin	ug/kg	8.2	ND	04/11/94
4,4-DDD	ug/kg	5.1	ND	04/11/94
Endosulfan II	ug/kg	20	ND	04/11/94
4,4-DDT	ug/kg	5.1	11	04/11/94
4,4-DDE	ug/kg	4.1	17	04/11/94
Endrin Aldehyde	ug/kg	34	ND	04/11/94
Endosulfan Sulfate	ug/kg	20	ND	04/11/94
Chlordane	ug/kg	8.2	70	04/11/94
Methoxychlor	ug/kg	10	ND	04/11/94
Toxaphene	ug/kg	85	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.10	83	04/11/94



2 4 0192

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 9April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411529
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
3-A

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2154	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	16	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94
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A-BHC	ug/kg	44	ND	04/11/94
B-BHC	ug/kg	44	ND	04/11/94
G-BHC	ug/kg	44	ND	04/11/94
D-BHC	ug/kg	44	ND	04/11/94
Heptachlor	ug/kg	89	ND	04/11/94
Aldrin	ug/kg	44	ND	04/11/94
Heptachlor Epoxide	ug/kg	44	ND	04/11/94
Endosulfan	ug/kg	220	ND	04/11/94
Dieldrin	ug/kg	44	52	04/11/94
Endrin	ug/kg	89	ND	04/11/94
4,4-DDD	ug/kg	55	ND	04/11/94
Endosulfan II	ug/kg	220	ND	04/11/94
4,4-DDT	ug/kg	55	280	04/11/94
4,4-DDE	ug/kg	44	380	04/11/94
Endrin Aldehyde	ug/kg	370	ND	04/11/94
Endosulfan Sulfate	ug/kg	220	ND	04/11/94
Chlordane	ug/kg	89	3100 (2)	04/11/94
Methoxychlor	ug/kg	110	ND	04/11/94
Toxaphene	ug/kg	920	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	1.1	35	04/11/94



2 4 0193

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 10April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00025

PACE Sample Number: 90 0411537
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
3-B

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2155	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	21	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS				03/31/94
A-BHC	ug/kg	48	ND	04/11/94
B-BHC	ug/kg	48	ND	04/11/94
G-BHC	ug/kg	48	ND	04/11/94
D-BHC	ug/kg	48	ND	04/11/94
Heptachlor	ug/kg	97	ND	04/11/94
Aldrin	ug/kg	48	ND	04/11/94
Heptachlor Epoxide	ug/kg	48	ND	04/11/94
Endosulfan	ug/kg	240	ND (1)	04/11/94
Dieldrin	ug/kg	48	68	04/11/94
Endrin	ug/kg	97	ND	04/11/94
4,4-DDD	ug/kg	60	ND	04/11/94
Endosulfan II	ug/kg	240	ND	04/11/94
4,4-DDT	ug/kg	60	340	04/11/94
4,4-DDE	ug/kg	48	190	04/11/94
Endrin Aldehyde	ug/kg	400	ND	04/11/94
Endosulfan Sulfate	ug/kg	240	ND	04/11/94
Chlordane	ug/kg	97	3500 (2)	04/11/94
Methoxychlor	ug/kg	120	ND	04/11/94
Toxaphene	ug/kg	1000	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	1.2	34	04/11/94



2 4

0194

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 11April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411545
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
4-A

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2160	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	7.6	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
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A-BHC	ug/kg	88	ND	04/12/94
B-BHC	ug/kg	88	ND	04/12/94
G-BHC	ug/kg	88	ND	04/12/94
D-BHC	ug/kg	88	ND	04/12/94
Heptachlor	ug/kg	180	ND	04/12/94
Aldrin	ug/kg	88	ND	04/12/94
Heptachlor Epoxide	ug/kg	88	ND	04/12/94
Endosulfan	ug/kg	440	ND (1)	04/12/94
Dieldrin	ug/kg	88	ND	04/12/94
Endrin	ug/kg	180	ND	04/12/94
4,4-DDD	ug/kg	110	ND	04/12/94
Endosulfan II	ug/kg	440	ND	04/12/94
4,4-DDT	ug/kg	110	440	04/12/94
4,4-DDE	ug/kg	88	370	04/12/94
Endrin Aldehyde	ug/kg	730	ND	04/12/94
Endosulfan Sulfate	ug/kg	440	ND	04/12/94
Chlordane	ug/kg	180	12000 (2)	04/12/94
Methoxychlor	ug/kg	220	ND	04/12/94
Toxaphene	ug/kg	1800	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	2.2	85	04/12/94



2 4 0195

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 12April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411553
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-EXCOM
4-B

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>2161</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	6.1	04/01/94
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ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	84	ND	04/12/94
B-BHC	ug/kg	84	ND	04/12/94
G-BHC	ug/kg	84	ND	04/12/94
D-BHC	ug/kg	84	ND	04/12/94
Heptachlor	ug/kg	170	ND	04/12/94
Aldrin	ug/kg	84	ND	04/12/94
Heptachlor Epoxide	ug/kg	84	ND	04/12/94
Endosulfan	ug/kg	420	ND (1)	04/12/94
Dieldrin	ug/kg	84	ND	04/12/94
Endrin	ug/kg	170	ND	04/12/94
4,4-DDD	ug/kg	100	ND	04/12/94
Endosulfan II	ug/kg	420	ND	04/12/94
4,4-DDT	ug/kg	100	320	04/12/94
4,4-DDE	ug/kg	84	180	04/12/94
Endrin Aldehyde	ug/kg	690	ND	04/12/94
Endosulfan Sulfate	ug/kg	420	ND	04/12/94
Chlordane	ug/kg	170	9700 (2)	04/12/94
Methoxychlor	ug/kg	210	ND	04/12/94
Toxaphene	ug/kg	1700	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	2.1	86	04/12/94



2 4 0196

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411561
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM

Parameter	Units	PRL	2202	DATE ANALYZED
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	8.0	04/01/94
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ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS 03/31/94

A-BHC	ug/kg	220	ND	04/12/94
B-BHC	ug/kg	220	ND	04/12/94
G-BHC	ug/kg	220	ND	04/12/94
D-BHC	ug/kg	220	ND	04/12/94
Heptachlor	ug/kg	430	ND	04/12/94
Aldrin	ug/kg	220	ND	04/12/94
Heptachlor Epoxide	ug/kg	220	ND	04/12/94
Endosulfan	ug/kg	1100	ND (1)	04/12/94
Dieldrin	ug/kg	220	ND	04/12/94
Endrin	ug/kg	430	ND	04/12/94
4,4-DDD	ug/kg	270	ND	04/12/94
Endosulfan II	ug/kg	1100	ND	04/12/94
1,4-DDT	ug/kg	270	ND	04/12/94
4,4-DDE	ug/kg	220	250	04/12/94
Endrin Aldehyde	ug/kg	1800	ND	04/12/94
Endosulfan Sulfate	ug/kg	1100	ND	04/12/94
Chlordane	ug/kg	430	14000 (2)	04/12/94
Methoxychlor	ug/kg	540	ND	04/12/94
Toxaphene	ug/kg	4500	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	5.4	78	04/12/94



2 4 0197

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 14April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411570
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM

2
Parameter Units PRL 2203 DATE ANALYZED

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	6.5	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
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A-BHC	ug/kg	22	ND	04/12/94
B-BHC	ug/kg	22	ND	04/12/94
G-BHC	ug/kg	22	ND	04/12/94
D-BHC	ug/kg	22	ND	04/12/94
Heptachlor	ug/kg	43	ND	04/12/94
Aldrin	ug/kg	22	ND	04/12/94
Heptachlor Epoxide	ug/kg	22	ND	04/12/94
Endosulfan	ug/kg	110	ND	04/12/94
Dieldrin	ug/kg	22	ND	04/12/94
Endrin	ug/kg	43	ND	04/12/94
4,4-DDD	ug/kg	27	ND	04/12/94
Endosulfan II	ug/kg	110	ND	04/12/94
4,4-DDT	ug/kg	27	29	04/12/94
4,4-DDE	ug/kg	22	59	04/12/94
Endrin Aldehyde	ug/kg	180	ND	04/12/94
Endosulfan Sulfate	ug/kg	110	ND	04/12/94
Chlordane	ug/kg	43	950	04/12/94
Methoxychlor	ug/kg	54	ND	04/12/94
Toxaphene	ug/kg	450	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.54	71	04/12/94



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0198

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 15April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411588
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM
3

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2204</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	8.4	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
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A-BHC	ug/kg	22	ND	04/12/94
B-BHC	ug/kg	22	ND	04/12/94
G-BHC	ug/kg	22	ND	04/12/94
D-BHC	ug/kg	22	ND	04/12/94
Heptachlor	ug/kg	43	ND	04/12/94
Aldrin	ug/kg	22	ND	04/12/94
Heptachlor Epoxide	ug/kg	22	ND	04/12/94
Endosulfan	ug/kg	110	ND	04/12/94
Dieldrin	ug/kg	22	ND	04/12/94
Endrin	ug/kg	43	ND	04/12/94
4,4-DDD	ug/kg	27	ND	04/12/94
Endosulfan II	ug/kg	110	ND	04/12/94
4,4-DDT	ug/kg	27	ND	04/12/94
4,4-DDE	ug/kg	22	72	04/12/94
Endrin Aldehyde	ug/kg	180	ND	04/12/94
Endosulfan Sulfate	ug/kg	110	ND	04/12/94
Chlordane	ug/kg	43	370	04/12/94
Methoxychlor	ug/kg	54	ND	04/12/94
Toxaphene	ug/kg	450	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.54	55	04/12/94



2 4 0199

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 16April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411596
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>2205</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	13	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
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A-BHC	ug/kg	46	ND	04/12/94
B-BHC	ug/kg	46	ND	04/12/94
G-BHC	ug/kg	46	ND	04/12/94
D-BHC	ug/kg	46	ND	04/12/94
Heptachlor	ug/kg	92	ND	04/12/94
Aldrin	ug/kg	46	ND	04/12/94
Heptachlor Epoxide	ug/kg	46	ND	04/12/94
Endosulfan	ug/kg	230	ND	04/12/94
Dieldrin	ug/kg	46	ND	04/12/94
Endrin	ug/kg	92	ND	04/12/94
4,4-DDD	ug/kg	58	ND	04/12/94
Endosulfan II	ug/kg	230	ND	04/12/94
4,4-DDT	ug/kg	58	53	04/12/94
4,4-DDE	ug/kg	46	ND	04/12/94
Endrin Aldehyde	ug/kg	380	ND	04/12/94
Endosulfan Sulfate	ug/kg	230	ND	04/12/94
Chlordane	ug/kg	92	2800 (2)	04/12/94
Methoxychlor	ug/kg	120	ND	04/12/94
Toxaphene	ug/kg	950	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	1.2	68	04/12/94



2 4

0200

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 17April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number:	90 0411600
Date Collected:	03/25/94
Date Received:	03/28/94
Client Sample ID:	CO-5COM
	5

Parameter	Units	PRI	2206	DATE ANALYZED
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	6.0	04/01/94
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ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS

A-BHC	ug/kg	4.2	ND	04/11/94
B-BHC	ug/kg	4.2	ND	04/11/94
G-BHC	ug/kg	4.2	ND	04/11/94
D-BHC	ug/kg	4.2	ND	04/11/94
Heptachlor	ug/kg	8.5	ND	04/11/94
Aldrin	ug/kg	4.2	ND	04/11/94
Heptachlor Epoxide	ug/kg	4.2	ND	04/11/94
Endosulfan	ug/kg	21	ND (1)	04/11/94
Dieldrin	ug/kg	4.2	30	04/11/94
Endrin	ug/kg	8.5	45	04/11/94
4,4-DDD	ug/kg	5.3	ND	04/11/94
Endosulfan II	ug/kg	21	ND	04/11/94
4,4-DDT	ug/kg	5.3	20	04/11/94
4,4-DDE	ug/kg	4.2	8.0	04/11/94
Endrin Aldehyde	ug/kg	35	ND	04/11/94
Endosulfan Sulfate	ug/kg	21	ND	04/11/94
Chlordane	ug/kg	8.5	500	04/11/94
Methoxychlor	ug/kg	11	ND	04/11/94
Toxaphene	ug/kg	88	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.11	23	04/11/94



2 4 0201

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 18April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411618
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM
6

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>DATE ANALYZED</u>
		2207	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	7.4	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94
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A-BHC	ug/kg	22	ND	04/11/94
B-BHC	ug/kg	22	ND	04/11/94
G-BHC	ug/kg	22	ND	04/11/94
D-BHC	ug/kg	22	ND	04/11/94
Heptachlor	ug/kg	44	ND	04/11/94

Aldrin	ug/kg	22	ND	04/11/94
Heptachlor Epoxide	ug/kg	22	ND	04/11/94
Endosulfan	ug/kg	110	ND (1)	04/11/94
Dieldrin	ug/kg	22	ND	04/11/94
Endrin	ug/kg	44	ND	04/11/94
4,4-DDD	ug/kg	27	ND	04/11/94

Endosulfan II	ug/kg	110	ND	04/11/94
4,4-DDT	ug/kg	27	82	04/11/94
4,4-DDE	ug/kg	22	72	04/11/94
Endrin Aldehyde	ug/kg	180	ND	04/11/94
Endosulfan Sulfate	ug/kg	110	ND	04/11/94
Chlordane	ug/kg	44	1200 (2)	04/11/94

Methoxychlor	ug/kg	54	ND	04/11/94
Toxaphene	ug/kg	450	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	4	44	04/11/94



2 4 0202

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 19April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411626
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM
7

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>2208</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	8.3	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
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A-BHC	ug/kg	4.4	ND	04/11/94
B-BHC	ug/kg	4.4	ND	04/11/94
G-BHC	ug/kg	4.4	ND	04/11/94
D-BHC	ug/kg	4.4	ND	04/11/94
Heptachlor	ug/kg	8.7	ND	04/11/94
Aldrin	ug/kg	4.4	ND	04/11/94
Heptachlor Epoxide	ug/kg	4.4	ND	04/11/94
Endosulfan	ug/kg	22	ND (1)	04/11/94
Dieldrin	ug/kg	4.4	6.9	04/11/94
Endrin	ug/kg	8.7	ND	04/11/94
4,4-DDD	ug/kg	5.4	ND	04/11/94
Endosulfar II	ug/kg	22	ND	04/11/94
4,4-DDT	ug/kg	5.4	15	04/11/94
4,4-DDE	ug/kg	4.4	99	04/11/94
Endrin Aldehyde	ug/kg	36	ND	04/11/94
Endosulfan Sulfate	ug/kg	22	ND	04/11/94
Chlordane	ug/kg	8.7	3700 (2)	04/11/94
Methoxychlor	ug/kg	11	ND	04/11/94
Toxaphene	ug/kg	90	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.11	60	04/11/94



2 4 0203

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 20April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411634
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>2209</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	6.2	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS		03/31/94	
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A-BHC	ug/kg	44	ND	04/12/94
B-BHC	ug/kg	44	ND	04/12/94
G-BHC	ug/kg	44	ND	04/12/94
D-BHC	ug/kg	44	ND	04/12/94
Heptachlor	ug/kg	87	ND	04/12/94
Aldrin	ug/kg	44	ND	04/12/94
Heptachlor Epoxide	ug/kg	44	ND	04/12/94
Endosulfan	ug/kg	220	ND	04/12/94
Dieldrin	ug/kg	44	300	04/12/94
Endrin	ug/kg	87	ND	04/12/94
4,4-DDD	ug/kg	54	ND	04/12/94
Endosulfan II	ug/kg	220	ND	04/12/94
4,4-DDT	ug/kg	54	260	04/12/94
4,4-DDE	ug/kg	44	150	04/12/94
Endrin Aldehyde	ug/kg	360	ND	04/12/94
Endosulfan Sulfate	ug/kg	220	ND	04/12/94
Chlordane	ug/kg	87	2000	04/12/94
Methoxychlor	ug/kg	110	ND	04/12/94
Toxaphene	ug/kg	900	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	1.1	71	04/12/94



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0204

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 21April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411642
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>DATE ANALYZED</u>
		9	
		2210	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	24	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS	04/01/94
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A-BHC	ug/kg	5.3	ND	04/11/94
B-BHC	ug/kg	5.3	ND	04/11/94
G-BHC	ug/kg	5.3	ND	04/11/94
D-BHC	ug/kg	5.3	ND	04/11/94
Heptachlor	ug/kg	11	ND	04/11/94
Aldrin	ug/kg	5.3	ND	04/11/94
Heptachlor Epoxide	ug/kg	5.3	ND	04/11/94
Endosulfan	ug/kg	26	ND	04/11/94
Dieldrin	ug/kg	5.3	ND	04/11/94
Endrin	ug/kg	11	ND	04/11/94
4,4-DDD	ug/kg	6.6	ND	04/11/94
Endosulfan II	ug/kg	26	ND	04/11/94
4,4-DDT	ug/kg	6.6	ND	04/11/94
4,4-DDE	ug/kg	5.3	ND	04/11/94
Endrin Aldehyde	ug/kg	44	ND	04/11/94
Endosulfan Sulfate	ug/kg	26	ND	04/11/94
Chlordane	ug/kg	11	74	04/11/94
Methoxychlor	ug/kg	13	ND	04/11/94
Toxaphene	ug/kg	110	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.13	63	04/11/94



2 4

0205

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 22April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411650
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM
10

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>DATE ANALYZED</u>
		2211	

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	33	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 04/01/94

A-BHC	ug/kg	6.1	ND	04/11/94
B-BHC	ug/kg	6.1	ND	04/11/94
G-BHC	ug/kg	6.1	ND	04/11/94
D-BHC	ug/kg	6.1	ND	04/11/94
Heptachlor	ug/kg	12	ND	04/11/94
Aldrin	ug/kg	6.1	ND	04/11/94
Heptachlor Epoxide	ug/kg	6.1	ND	04/11/94
Endosulfan	ug/kg	30	ND	04/11/94
Dieldrin	ug/kg	6.1	ND	04/11/94
Endrin	ug/kg	12	ND	04/11/94
4,4-DDD	ug/kg	7.6	ND	04/11/94
Endosulfan II	ug/kg	30	ND	04/11/94
4,4-DDT	ug/kg	7.6	15	04/11/94
4,4-DDE	ug/kg	6.1	23	04/11/94
Endrin Aldehyde	ug/kg	50	ND	04/11/94
Endosulfan Sulfate	ug/kg	30	ND	04/11/94
Chlordane	ug/kg	12	280 (4)	04/11/94
Methoxychlor	ug/kg	15	ND	04/11/94
Toxaphene	ug/kg	130	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.15	52	04/11/94



2 4

0206

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 23April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

PACE Sample Number: 90 0411669
Date Collected: 03/25/94
Date Received: 03/28/94
Client Sample ID: CO-5COM
11

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>2212</u>	<u>DATE ANALYZED</u>
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INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	4.6	04/01/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS				04/01/94
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A-BHC	ug/kg	80	ND	04/12/94
B-BHC	ug/kg	80	ND	04/12/94
G-BHC	ug/kg	80	ND	04/12/94
D-BHC	ug/kg	80	ND	04/12/94
Heptachlor	ug/kg	160	ND	04/12/94
Aldrin	ug/kg	80	ND	04/12/94
Heptachlor Epoxide	ug/kg	80	ND	04/12/94
Endosulfan	ug/kg	400	ND (1)	04/12/94
Dieldrin	ug/kg	80	ND	04/12/94
Endrin	ug/kg	160	ND	04/12/94
4,4-DDD	ug/kg	100	ND	04/12/94
Endosulfan II	ug/kg	400	ND	04/12/94
4,4-DDT	ug/kg	100	59	04/12/94
4,4-DDE	ug/kg	80	68	04/12/94
Endrin Aldehyde	ug/kg	660	ND	04/12/94
Endosulfan Sulfate	ug/kg	400	ND	04/12/94
Chiordane	ug/kg	160	2500 (2)	04/12/94
Methoxychlor	ug/kg	200	ND	04/12/94
Toxaphene	ug/kg	1700	ND	04/12/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	2.0	32	04/12/94



2 4

0207

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic Chemistry
Michael W. Palmer
Manager, Organic Chemistry



2 4 0208

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 25FOOTNOTES
for pages 1 through 24April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

- ND Not detected at or above the PRL.
PRL PACE Reporting Limit
(1) Compound could not be quantified due to presence of technical chlordane.
(2) High concentrations may mask the presence of other components in sample.
(3) Surrogate standards were not recovered due to sample dilution.
(4) Compound is degraded therefore an estimated value.



2 4 0209

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994

PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

Moisture

Batch: 90 50424

Samples: 90 0411448, 90 0411456, 90 0411464, 90 0411472, 90 0411480
90 0411499, 90 0411502, 90 0411510, 90 0411529, 90 0411537
90 0411545, 90 0411553, 90 0411561, 90 0411570, 90 0411588
90 0411596, 90 0411600, 90 0411618, 90 0411626, 90 0411634

METHOD BLANK AND SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>	<u>Blank</u>	Duplicate of	<u>RI</u>
Moisture	%	0.01	CO-SS VER-1	2156	90 0411448	37.9
			ND	41		



2 4 0210

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

Moisture

Batch: 90 50425

Samples: 90 0411642, 90 0411650, 90 0411669

METHOD BLANK AND SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>	<u>CO-5COM</u>	<u>Duplicate</u>	
	%		Blank	11	of	
			ND	2212	90 0411669	R
Moisture		0.01		4.6	4.4	



2 4 0211

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994

PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50660

Samples: 90 0411448, 90 0411456, 90 0411464, 90 0411472, 90 0411480
90 0411499, 90 0411502, 90 0411510, 90 0411529, 90 0411537
90 0411545, 90 0411553, 90 0411561, 90 0411570, 90 0411588
90 0411596, 90 0411600, 90 0411618, 90 0411626, 90 0411634

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
A-BHC	ug/kg	4	ND
B-BHC	ug/kg	4	ND
G-BHC	ug/kg	4	ND
D-BHC	ug/kg	4	ND
Heptachlor	ug/kg	8	ND
Aldrin	ug/kg	4	ND
Heptachlor Epoxide	ug/kg	4	ND
Endosulfan	ug/kg	20	ND
Dieldrin	ug/kg	4	ND
Endrin	ug/kg	8	ND
4,4-DDD	ug/kg	5	ND
Endosulfan II	ug/kg	20	ND
4,4-DDT	ug/kg	5	ND
4,4-DDE	ug/kg	4	ND
Endrin Aldehyde	ug/kg	33	ND
Endosulfan Sulfate	ug/kg	20	ND
Chlordane	ug/kg	8	ND
Methoxychlor	ug/kg	10	ND
Toxaphene	ug/kg	83	ND
2,4,5,6-Tetrachloro m-xylene - surrogat	%	0.1	78

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>900411448</u>	<u>CO-SS</u>	<u>VER-1</u>	<u>Spike</u>	<u>Spike</u>	<u>Dup1</u>	<u>Recy</u>	<u>Recy</u>	<u>RPI</u>
G-BHC	ug/kg	4.0141	ND DS								
G-BHC	ug/kg	4				8.3					
Heptachlor	ug/kg		8.0283 ND DS						(1)	(1)	



2 4 0212

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994
PACE Project Number: 2402145

Client Reference: CHEVRON ORLANDO / E00026

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50660

Samples: 90 0411448, 90 0411456, 90 0411464, 90 0411472, 90 0411480
90 0411499, 90 0411502, 90 0411510, 90 0411529, 90 0411537
90 0411545, 90 0411553, 90 0411561, 90 0411570, 90 0411588
90 0411596, 90 0411600, 90 0411618, 90 0411626, 90 0411634

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	PRL	900411448 CO-SS VER-1 2156	Spike		Spike Recv	Dupl Recv	RP
				Recv	8.3			
Heptachlor	ug/kg	8				(1)	(1)	
Aldrin	ug/kg	4.0141	ND DS					
Aldrin	ug/kg	4		8.3		(1)	(1)	
Dieldrin	ug/kg	4.0141	ND DS					
Dieldrin	ug/kg	4		33		(1)	(1)	
Endrin	ug/kg	8.0283	ND DS			(1)	(1)	
Endrin	ug/kg	8		33		(1)	(1)	
4,4-DDT	ug/kg	4.9586	17.7095631					
4,4-DDT	ug/kg	5	DS	33		(1)	(1)	

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	PRL	Reference Value	Dupl		RP
				Recv	Recv	
A-BHC	ug/kg	4	33	76%	76%	C
B-BHC	ug/kg	4	33	67%	70%	4
G-BHC	ug/kg	4	33	61%	64%	5
D-BHC	ug/kg	4	33	70%	76%	8
Heptachlor	ug/kg	8	33	58%	61%	E
Aldrin	ug/kg	4	33	61%	61%	C
Heptachlor Epoxide	ug/kg	4	33	67%	64%	5
Endosulfan	ug/kg	20	33	76%	67%	13
Dieldrin	ug/kg	4	33	76%	67%	13
Endrin	ug/kg	8	33	85%	85%	C



2 4 0213

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994

PACE Project Number: 2402145E

Client Reference: CHEVRON ORLANDO / E00026

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50660

Samples: 90 0411448, 90 0411456, 90 0411464, 90 0411472, 90 0411480
90 0411499, 90 0411502, 90 0411510, 90 0411529, 90 0411537
90 0411545, 90 0411553, 90 0411561, 90 0411570, 90 0411588
90 0411596, 90 0411600, 90 0411618, 90 0411626, 90 0411634

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	<u>Dupl</u>		
			<u>Value</u>	<u>Recy</u>	<u>Recy</u>	<u>RPI</u>
4,4-DDD	ug/kg	5	33	85%	82%	6
Endosulfan II	ug/kg	20	33	85%	76%	11
4,4-DDT	ug/kg	5	33	82%	76%	8
4,4-DDE	ug/kg	4	33	76%	70%	8
Endrin Aldehyde	ug/kg	33	33	55%	67%	20
Endosulfan Sulfate	ug/kg	20	33	73%	100%	31

Sample results are reported on a dry weight basis.

All positive 608/8080/Arochlor results are confirmed by analysis on a secondary column unless noted.



2 4 0214

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994
PACE Project Number: 2402145E

Client Reference: CHEVRON ORLANDO / E00026

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50662

Samples: 90 0411642, 90 0411650, 90 0411659

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method Blank</u>
A-BHC	ug/kg	4	ND
B-BHC	ug/kg	4	ND
G-BHC	ug/kg	4	ND
D-BHC	ug/kg	4	ND
Heptachlor	ug/kg	8	ND
Aldrin	ug/kg	4	ND
Heptachlor Epoxide	ug/kg	4	ND
Endosulfan	ug/kg	20	ND
Dieldrin	ug/kg	4	ND
Endrin	ug/kg	8	ND
4,4-DDD	ug/kg	5	ND
Endosulfan II	ug/kg	20	ND
4,4-DDT	ug/kg	5	ND
4,4-DDE	ug/kg	4	ND
Endrin Aldehyde	ug/kg	33	ND
Endosulfan Sulfate	ug/kg	20	ND
Chlordane	ug/kg	8	ND
Methoxychlor	ug/kg	10	ND
Toxaphene	ug/kg	83	ND
2,4,5,6-Tetrachloro m-xylene - surrogat	%	0.1	58

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
A-BHC	ug/kg	4	33	57%	70%	4%
B-BHC	ug/kg	4	33	70%	67%	4%
G-BHC	ug/kg	4	33	70%	70%	0%
D-BHC	ug/kg	4	33	73%	76%	4%
Heptachlor	ug/kg	8	33	67%	70%	4%
Aldrin	ug/kg	4	33	67%	52%	25%
Heptachlor Epoxide	ug/kg	4	33	67%	73%	9%
Endosulfan	ug/kg	20	33	73%	76%	4%



2 4

0215

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 18, 1994
PACE Project Number: 2402145E

Client Reference: CHEVRON ORLANDO / E00026

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50662

Samples: 90 0411642, 90 0411650, 90 0411669

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference</u>	<u>Recy</u>	<u>Dup1 Recy</u>	<u>RPL</u>
			<u>Value</u>			
Dieldrin	ug/kg	4	33	70%	79%	12
Endrin	ug/kg	8	33	79%	67%	16
4,4-DDD	ug/kg	5	33	73%	79%	8
Endosulfan II	ug/kg	20	33	70%	76%	8
4,4-DDT	ug/kg	5	33	61%	73%	18
4,4-DDE	ug/kg	4	33	73%	79%	8
Endrin Aldehyde	ug/kg	33	33	73%	67%	9
Endosulfan Sulfate	ug/kg	20	33	70%	88%	23

Sample results are reported on a dry weight basis.

All positive 608/8080/Arochlor results are confirmed by analysis on a secondary column unless noted.



2 4

0216

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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FOOTNOTES
for pages 26 through 32

April 18, 1994
PACE Project Number: 24021458

Client Reference: CHEVRON ORLANDO / E00026

- DS Concentration found on diluted sample.
ND Not detected at or above the PRL.
PRL PACE Reporting Limit
RPD Relative Percent Difference
(1) Spike and/or surrogate recoveries could not be calculated due to matrix interference.

150165

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client TASK Environmental

Address 710 S. Howard Ave

Telephone 254 8838

Sampled By (PRINT):

P. House Patience 3/21-3/25/94

Sampler Signature _____ Date Sampled _____

Phone _____

Report To: Susan Tobin

Bill To: _____

P.O. # / Billing Reference: _____

Pace Client No.: 12
Pace Project Manager: 4
Pace Project No.: 12

*Requested Due Date: 3/27/94

ITEM NO	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO
1	CO-EXCON-3A	2154	925	SOil
2	CO-EXCON-3B	2155	927	SOil
3	CO-EXCON-4A	2160	154	SOil
4	CO-EXCON-4B	2161	160	SOil
5	CO-5COM-1	2202	160	SOil
6	CO-5COM-2	2203	1705	SOil
7	CO-5COM-3	2204	1708	SOil
8	CO-5COM-4	2205	1708	SOil

NO. OF CONTAINERS	PRESERVATIVES			ANALYSES REQUEST	REMARKS
	UNPRESERVED	H ₂ SO ₄	HNO ₃		
1	X	X	X	X	4/152.9
1	X	X	X	X	4/153.7
1	X	X	X	X	4/154.5
1	X	X	X	X	4/155.3
1	X	X	X	X	4/156.1
1	X	X	X	X	4/157.0
1	X	X	X	X	4/157.3
1	X	X	X	X	4/158.8
1	X	X	X	X	4/159.6

ITEM NO	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO

ITEM NO	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO

Additional Comments

CONFIRM TASK Specimen Log 104

2 4 0218

**ANALYSIS DATED APRIL 13, 1994
BLANK SAMPLE RESULTS
AND ADDITIONAL EXCOM SAMPLES**



2 4 0219

REPORT OF LABORATORY ANALYSIS

April 13, 1994

Ms. Susan Tobin
Task Environmental
710 South Howard Avenue
Tampa, FL 33606

RE: PACE Project No. 240328.590
Client Reference: CHEVRON ORLANDO PHASE II RAPA

Dear Ms. Tobin:

Enclosed is the report of laboratory analyses for samples received March 30, 1994.

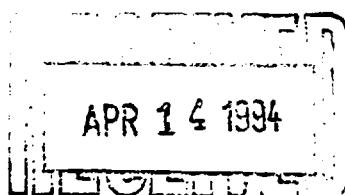
Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Chris Jock
Project Manager

Enclosures





2 4 0220

REPORT OF LABORATORY ANALYSIS

Task Environmental
710 South Howard Avenue
Tampa, FL 33606

April 13, 1994
PACE Project Number: 24032859

Attn: Ms. Susan Tobin

Client Reference: CHEVRON ORLANDO PHASE II RAPA

PACE Sample Number:	90 0413645		
Date Collected:	03/29/94		
Date Received:	03/30/94		
Client Sample ID:	Equipment		
<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Blank</u> <u>DATE ANALYZED</u>

ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES AND PCB'S

Date Extracted-Pesticides/PCBS			03/31/94	
a-BHC	ug/L	0.05	ND	04/05/94
b-BHC	ug/L	0.05	ND	04/05/94
g-BHC	ug/L	0.05	ND	04/05/94
d-BHC	ug/L	0.05	ND	04/05/94
Heptachlor	ug/L	0.05	ND	04/05/94
Aldrin	ug/L	0.05	ND	04/05/94
Heptachlor epoxide	ug/L	0.05	ND	04/05/94
Endosulfan I	ug/L	0.05	ND	04/05/94
Dieldrin	ug/L	0.1	ND	04/05/94
Endrin	ug/L	0.1	ND	04/05/94
4,4-DDD	ug/L	0.1	ND	04/05/94
Endosulfan II	ug/L	0.1	ND	04/05/94
4,4-DDT	ug/L	0.1	ND	04/05/94
4,4-DDE	ug/L	0.1	ND	04/05/94
Endrin aldehyde	ug/L	0.1	ND	04/05/94
Endosulfan sulfate	ug/L	0.1	ND	04/05/94
Chlordane	ug/L	1.0	ND	04/05/94
Methoxychlor	ug/L	0.5	ND	04/05/94
Toxaphene	ug/L	3.0	ND	04/05/94
PCB-1016	ug/L	0.5	ND	04/05/94
PCB-1221	ug/L	0.5	ND	04/05/94
PCB-1232	ug/L	0.5	ND	04/05/94
PCB-1242	ug/L	0.1	ND	04/05/94
PCB-1248	ug/L	0.1	ND	04/05/94
PCB-1254	ug/L	0.5	ND	04/05/94
PCB-1260	ug/L	0.5	ND	04/05/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.1	100	04/05/94



2 4 0221

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 2April 13, 1994
PACE Project Number: 24032859

Client Reference: CHEVRON ORLANDO PHASE II RAPA

PACE Sample Number:	90 0413653		
Date Collected:	03/29/94		
Date Received:	03/30/94		
Client Sample ID:	Field		
<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Blank</u>

ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES AND PCB'S

Date Extracted-Pesticides/PCBS 03/31/94

a-BHC	ug/L	0.05	ND	04/05/94
b-BHC	ug/L	0.05	ND	04/05/94
g-BHC	ug/L	0.05	ND	04/05/94
d-BHC	ug/L	0.05	ND	04/05/94
Heptachlor	ug/L	0.05	ND	04/05/94
Aldrin	ug/L	0.05	ND	04/05/94
Heptachlor epoxide	ug/L	0.05	ND	04/05/94
Endosulfan I	ug/L	0.05	ND	04/05/94
Dieldrin	ug/L	0.1	ND	04/05/94
Endrin	ug/L	0.1	ND	04/05/94
4,4-DDD	ug/L	0.1	ND	04/05/94
Endosulfan II	ug/L	0.1	ND	04/05/94
4,4-DDT	ug/L	0.1	ND	04/05/94
4,4-DDE	ug/L	0.1	ND	04/05/94
Endrin aldehyde	ug/L	0.1	ND	04/05/94
Endosulfan sulfate	ug/L	0.1	ND	04/05/94
Chlordane	ug/L	1.0	ND	04/05/94
Methoxychlor	ug/L	0.5	ND	04/05/94
Toxaphene	ug/L	3.0	ND	04/05/94
PCB-1016	ug/L	0.5	ND	04/05/94
PCB-1221	ug/L	0.5	ND	04/05/94
PCB-1232	ug/L	0.5	ND	04/05/94
PCB-1242	ug/L	0.1	ND	04/05/94
PCB-1248	ug/L	0.1	ND	04/05/94
PCB-1254	ug/L	0.5	ND	04/05/94
PCB-1260	ug/L	0.5	ND	04/05/94
2,4,5,6-Tetrachloro m-xylene - surrogate %		0.1	84	04/05/94



2 4 0222

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 3April 13, 1994
PACE Project Number: 24032859

Client Reference: CHEVRON ORLANDO PHASE II RAPA

PACE Sample Number: 90 0413629

Date Collected: 03/28/94

Date Received: 03/30/94

Client Sample ID: CO-5COM

Parameter	Units	PRL	Rev	DATE ANALYZED
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INORGANIC ANALYSIS

INDIVIDUAL PARAMETERS

Moisture	%	0.01	4.2	04/07/94
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ORGANIC ANALYSIS

8080 ORGANOCHLORINE PESTICIDES

Date Extracted-Pesticides/PCBS 04/01/94

A-BHC	ug/kg	8.3	ND	04/12/94
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B-BHC	ug/kg	8.3	ND	04/12/94
-------	-------	-----	----	----------

G-BHC	ug/kg	8.3	ND	04/12/94
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D-BHC	ug/kg	8.3	ND	04/12/94
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Heptachlor	ug/kg	17	ND	04/12/94
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Aldrin	ug/kg	8.3	ND	04/12/94
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Heptachlor Epoxide	ug/kg	8.3	ND	04/12/94
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Endosulfan	ug/kg	42	ND	04/12/94
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Dieldrin	ug/kg	8.3	ND	04/12/94
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Endrin	ug/kg	17	ND	04/12/94
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4,4-DDD	ug/kg	10	ND	04/12/94
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Endosulfan II	ug/kg	42	ND	04/12/94
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4,4-DDT	ug/kg	10	49	04/12/94
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4,4-DDE	ug/kg	8.3	69	04/12/94
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Endrin Aldehyde	ug/kg	69	ND	04/12/94
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Endosulfan Sulfate	ug/kg	42	ND	04/12/94
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Chlordane	ug/kg	17	440	04/12/94
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Methoxychlor	ug/kg	21	ND	04/12/94
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Toxaphene	ug/kg	170	ND	04/12/94
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2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.21	51	04/12/94
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2 4 0223

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 4April 13, 1994
PACE Project Number: 2403285

Client Reference: CHEVRON ORLANDO PHASE II RAPA

PACE Sample Number: 90 0413637

Date Collected: 03/28/94

Date Received: 03/30/94

Client Sample ID: CO-5COM

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Z Rev</u>	<u>DATE ANALYZED</u>
------------------	--------------	------------	--------------	----------------------

INORGANIC ANALYSIS**INDIVIDUAL PARAMETERS**

Moisture	%	0.01	4.4	04/07/94
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ORGANIC ANALYSIS**8080 ORGANOCHLORINE PESTICIDES**

Date Extracted-Pesticides/PCBS 04/01/94

A-BHC	ug/kg	4.2	ND	04/11/94
B-BHC	ug/kg	4.2	ND	04/11/94
G-BHC	ug/kg	4.2	ND	04/11/94
D-BHC	ug/kg	4.2	ND	04/11/94
Heptachlor	ug/kg	8.3	ND	04/11/94
Aldrin	ug/kg	4.2	ND	04/11/94
Heptachlor Epoxide	ug/kg	4.2	ND	04/11/94
Endosulfan	ug/kg	21	ND	04/11/94
Dieldrin	ug/kg	4.2	ND	04/11/94
Endrin	ug/kg	8.3	ND	04/11/94
4,4-DDD	ug/kg	5.2	ND	04/11/94
Endosulfan II	ug/kg	21	ND	04/11/94
4,4-DDT	ug/kg	5.2	ND	04/11/94
4,4-DDE	ug/kg	4.2	ND	04/11/94
Endrin Aldehyde	ug/kg	34	ND	04/11/94
Endosulfan Sulfate	ug/kg	21	ND	04/11/94
Chlordane	ug/kg	8.3	110	04/11/94
Methoxychlor	ug/kg	10	ND	04/11/94
Toxaphene	ug/kg	86	ND	04/11/94
2,4,5,6-Tetrachloro m-xylene - surrogate	%	0.10	50	04/11/94



2 4

0224

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 5

April 13, 1994
PACE Project Number: 24032859

Client Reference: CHEVRON ORLANDO PHASE II RAPA

These data have been reviewed and are approved for release.

Michael F. Valder
Manager, Inorganic Chemistry

Michael W. Palmer
Manager, Organic Chemistry



2 4 0225

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
Page 6FOOTNOTES
for pages 1 through 5April 13, 1994
PACE Project Number: 24032859

Client Reference: CHEVRON ORLANDO PHASE II RAPA

ND Not detected at or above the PRL.
PRL PACE Reporting Limit



2 4 0226

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 7

QUALITY CONTROL DATA

April 13, 1994
PACE Project Number: 24032859

Client Reference: CHEVRON ORLANDO PHASE II RAPA

Moisture

Batch: 90 50623
Samples: 90 0413629, 90 0413637

METHOD BLANK AND SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Method</u>	<u>Blank</u>	<u>1 Rev</u>	Duplicate of	<u>RP</u>
Moisture	%	0.01	CO-5COM	ND	4.2	90 0413629	3.9



2 4

0227

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 8

QUALITY CONTROL DATA

April 13, 1994

PACE Project Number: 2403285

Client Reference: CHEVRON ORLANDO PHASE II RAPA

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50662

Samples: 90 0413629, 90 0413637

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRl</u>	<u>Method Blank</u>
A-BHC	ug/kg	4	ND
B-BHC	ug/kg	4	ND
G-BHC	ug/kg	4	ND
D-BHC	ug/kg	4	ND
Heptachlor	ug/kg	8	ND
Aldrin	ug/kg	4	ND
Heptachlor Epoxide	ug/kg	4	ND
Endosulfan	ug/kg	20	ND
Dieldrin	ug/kg	4	ND
Endrin	ug/kg	8	ND
4,4-DDD	ug/kg	5	ND
Endosulfan II	ug/kg	20	ND
4,4-DDT	ug/kg	5	ND
4,4-DDE	ug/kg	4	ND
Endrin Aldehyde	ug/kg	33	ND
Endosulfan Sulfate	ug/kg	20	ND
Chlordane	ug/kg	8	ND
Methoxychlor	ug/kg	10	ND
Toxaphene	ug/kg	83	ND
2,4,5,6-Tetrachloro m-xylene - surrogat	%	0.1	58

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRl</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Dupl Recv</u>	<u>RPI</u>
A-BHC	ug/kg	4	33	67%	70%	C
B-BHC	ug/kg	4	33	70%	67%	C
G-BHC	ug/kg	4	33	70%	70%	C
D-BHC	ug/kg	4	33	73%	75%	C
Heptachlor	ug/kg	8	33	67%	70%	C
Aldrin	ug/kg	4	33	67%	52%	25
Heptachlor Epoxide	ug/kg	4	33	67%	73%	C
Endosulfan	ug/kg	20	33	73%	76%	C



2 4 0228

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
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QUALITY CONTROL DATA

April 13, 1994
PACE Project Number: 2403285

Client Reference: CHEVRON ORLANDO PHASE II RAPA

8080 ORGANOCHLORINE PESTICIDES

Batch: 90 50662

Samples: 90 0413629, 90 0413637

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRL</u>	<u>Reference Value</u>	<u>Recy</u>	Dupl <u>Recy</u>	RPC
Dieldrin	ug/kg	4	33	70%	79%	12
Endrin	ug/kg	8	33	79%	67%	16
4,4-DDD	ug/kg	5	33	73%	79%	8
Endosulfan II	ug/kg	20	33	70%	76%	8
4,4-DDT	ug/kg	5	33	61%	73%	18
4,4-DDE	ug/kg	4	33	73%	79%	8
Endrin Aldehyde	ug/kg	33	33	73%	67%	9
Endosulfan Sulfate	ug/kg	20	33	70%	88%	23

Sample results are reported on a dry weight basis.

All positive 608/8080/Arochlor results are confirmed by analysis on a secondary column unless noted.



2 4 0229

REPORT OF LABORATORY ANALYSISMs. Susan Tobin
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QUALITY CONTROL DATA

April 13, 1994
PACE Project Number: 24032859

Client Reference: CHEVRON ORLANDO PHASE II RAPA

8080 ORGANOCHLORINE PESTICIDES AND PCB'S

Batch: 90 50564

Samples: 90 0413645, 90 0413653

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Method Blank</u>
a-BHC	ug/L	0.05	ND
b-BHC	ug/L	0.05	ND
g-BHC	ug/L	0.05	ND
d-BHC	ug/L	0.05	ND
Heptachlor	ug/L	0.05	ND
Aldrin	ug/L	0.05	ND
Heptachlor epoxide	ug/L	0.05	ND
Endosulfan I	ug/L	0.05	ND
Dieldrin	ug/L	0.1	ND
Endrin	ug/L	0.1	ND
4,4-DDU	ug/L	0.1	ND
Endosulfan II	ug/L	0.1	ND
4,4-DDT	ug/L	0.1	ND
4,4-DDE	ug/L	0.1	ND
Endrin aldehyde	ug/L	0.1	ND
Endosulfan sulfate	ug/L	0.1	ND
Chlordane	ug/L	1.0	ND
Methoxychlor	ug/L	0.5	ND
Toxaphene	ug/L	3.0	ND
PCB-1016	ug/L	0.5	ND
PCB-1221	ug/L	0.5	ND
PCB-1232	ug/L	0.5	ND
PCB-1242	ug/L	0.1	ND
PCB-1248	ug/L	0.1	ND
PCB-1254	ug/L	0.5	ND
PCB-1260	ug/L	0.5	ND
2,4,5,6-Tetrachloro m-xylene - surrogat	%	0.1	107



2 4 0230

REPORT OF LABORATORY ANALYSIS

Ms. Susan Tobin
Page 11

QUALITY CONTROL DATA

April 13, 1994
PACE Project Number: 2403285

Client Reference: CHEVRON ORLANDO PHASE II RAPA

8080 ORGANOCHLORINE PESTICIDES AND PCBs

Batch: 90 50564

Samples: 90 0413645, 90 0413653

SPIKE AND SPIKE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>900412908</u>	<u>Spike</u>	<u>Spike Recv</u>	<u>Dupl Recv</u>	<u>R%</u>
g-BHC	ug/L	0.05	ND	0.5	64%	78%	20
Heptachlor	ug/L	0.05	ND	0.5	56%	70%	21
Aldrin	ug/L	0.05	ND	0.5	62%	82%	21
Dieldrin	ug/L	0.1	ND	2.0	89%	86%	1
Endrin	ug/L	0.1	ND	2.0	94%	86%	1
4,4-DDT	ug/L	0.1	ND	2.0	100%	115%	11

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>PRI</u>	<u>Reference Value</u>	<u>Dupl Recv</u>	<u>Dupl Recv</u>	<u>R%</u>
a-BHC	ug/L	0.05	2.0	63%	75%	11
b-BHC	ug/L	0.05	2.0	76%	95%	21
g-BHC	ug/L	0.05	2.0	65%	75%	14
d-BHC	ug/L	0.05	2.0	79%	95%	18
Heptachlor	ug/L	0.05	2.0	65%	75%	14
Aldrin	ug/L	0.05	2.0	60%	75%	22
Heptachlor epoxide	ug/L	0.05	2.0	75%	95%	24
Endosulfan I	ug/L	0.05	2.0	75%	95%	24
Dieldrin	ug/L	0.1	2.0	90%	115%	24
Endrin	ug/L	0.1	2.0	95%	115%	19
4,4-DDD	ug/L	0.1	2.0	85%	110%	28
Endosulfan II	ug/L	0.1	2.0	85%	105%	21
4,4-DDT	ug/L	0.1	2.0	110%	155% (1)	34
4,4-DDE	ug/L	0.1	2.0	85%	115%	30
Endrin aldehyde	ug/L	0.1	2.0	80%	95%	17
Endosulfan sulfate	ug/L	0.1	2.0	105%	140% (1)	29



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ND Not detected at or above the PRL.
PRL PACE Reporting Limit
RPD Relative Percent Difference
(1) Matrix interference.

